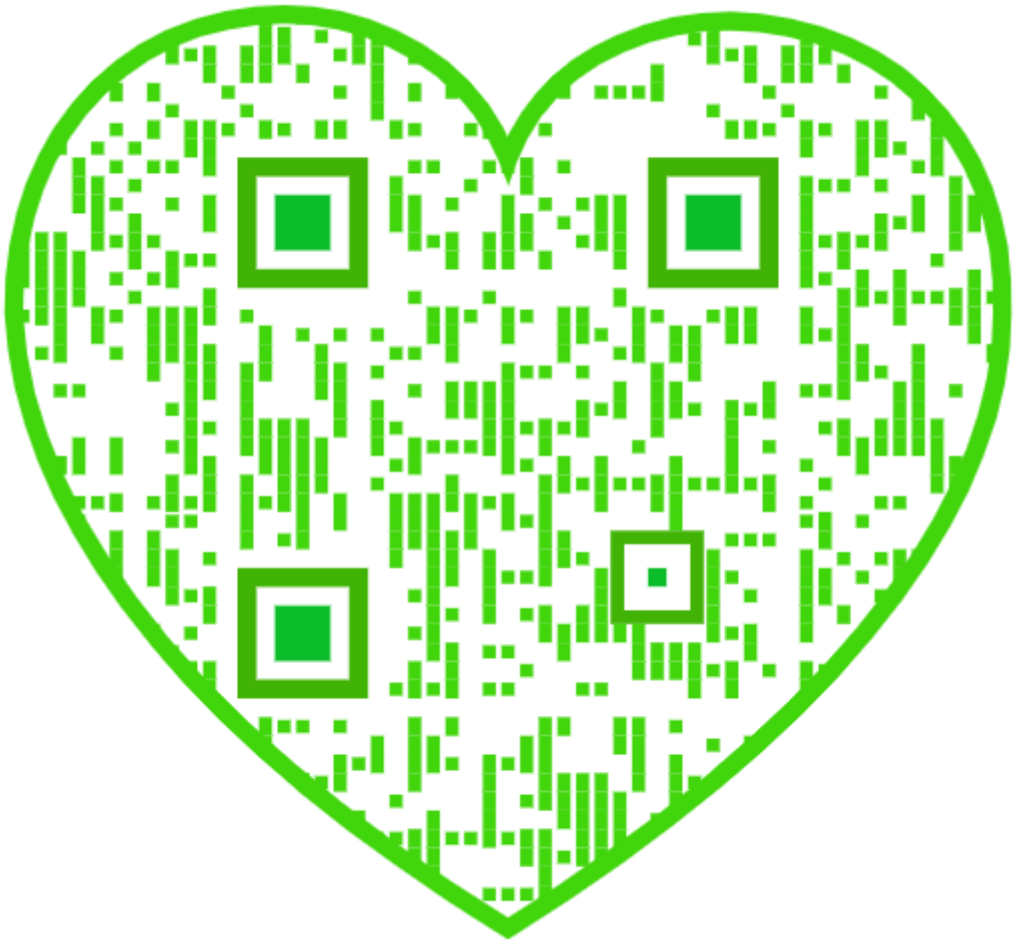
Painless Childbirth

and diseases of

Women and Children



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Very respectfully,
DR. J. H. DYE MEDICAL INSTITUTE.
Buffalo, N. Y.

ILLUSTRATED EDITION OF

PAINLESS CHILDBIRTH

OR

HEALTHY MOTHERS

AND

HEALTHY CHILDREN

A BOOK FOR ALL WOMEN

BY JOHN H. DYE, M. D.
BUFFALO, N. Y.

NINETEENTH EDITION

Revised and Enlarged by Members of the Staff
of the
DR. J. H. DYE MEDICAL INSTITUTE
Buffalo, N. Y.

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PREFACE

SIX thousand years of agony! Six thousand years of unnecessary suffering! It seems scarcely credible, yet it is a fact, that for all these years our race has been perpetuated in pain and anguish. What a sacrifice for woman to make on the altar of maternal affection, while all this time her male companion has accepted the tradional superstitions of the past that it *must be*, apparently satisfied to see her suffer in childbirth, with little or no effort for her relief or the prevention of her agony.

Doubtless many to whom our views are presented will at first declare "Painless Childbirth" a preposterous idea, but it will be because they jump at the conclusion before they investigate and consider the methods by which it is to be accomplished. It will be because they think that as woman has endured so much misery through all these years she must continue to do so for all time to come.

To blindly accept the doctrine that our race can be perpetuated only in the midst of cruel pains is a pernicious submission to credulity and superstition almost as fallacious as it is wicked.

Though it may be contrary to what is generally

observed I assert that the terrible agony woman suffers at childbirth is unnecessary, and may, in most cases at least, either be greatly modified or entirely overcome. In proof of this assertion scores of women have submitted the plans detailed in the following pages to the test of practical experience with the most gratifying results. They have found that by following a few easy and simple instructions the duration of labor may be reduced to a few hours or minutes and that pains may be rendered so slight as to be scarcely worthy of notice. In addition, they have found that the same rules have entirely relieved the annoyances so often an accompaniment of gestation.

I do not profess to have originated the idea that childbirth should be without pain, although so far as I am aware I have been first to show the relations between the causes of pain and their remedies and put the same into a practical form that woman might avail herself of their advantage. I do not wish to be understood that no one else has done anything in this direction. I have endeavored to give credit wherever it is due, and if I have failed to do justice in any case it has been unintentional. I do not hesitate to say that I have made use of their views and added my own; at the same time I have endeavored to render them all practicable and by the combination increase the advantages.

I confess astonishment that obstetric literature should be so barren of suggestions for the prevention of pain at labor as it is. The genius of obstetricians seems to have been directed to the successful accomplishment of labor rather than to the prevention of

suffering, consequently their art has been of advantage chiefly in difficult and protracted labors, which fortunately occur in but a limited proportion of births.

My attention was at first directed to the fact that some women suffer so much more severely than others, and I was led to inquire why the sufferings of all might not be reduced to the minimum. The answer was that the physical conditions of all women were not equally favorable to the avoidance of pain. The next step was to decide, if possible, what caused these unfavorable conditions and to seek for a method by which they might be rendered more favorable. Physiology had taught me that all functions when properly performed, as nature had intended, should be without pain, and as childbirth is a natural function of woman I reasoned that it should be painless. It then remained to find means that would overcome these morbid conditions so generally attendant upon this function and make the process a painless one. How well I have succeeded, those who follow these suggestions will be able to answer.

The accomplishment of this purpose necessitated overcoming as far as possible the diseases peculiar to women, and a separate chapter on this subject was prepared, describing such means as would be likely to prove successful in her hands, and which I have the satisfaction of knowing have been productive of great good, although in a few instances in which severe complications in the way of chronic diseases existed I have found it advisable to give special advice that could be of little use to the general reader in the conduct of her own treatment.

As the mother and child are so nearly inseparable

I have endeavored to give some practical advice regarding the recognition and treatment of the diseases of early life, fully believing that the time-honored maxim, that "an ounce of prevention is worth a pound of cure," still holds good, and if the mother recognizes the disease in its incipiency she may often call to her assistance such means as will prevent fatal consequences or avert lifelong affliction.

Good, healthy children must always be regarded by the pure in heart as chief of "God's choicest blessings," and it is to be hoped those whose homes are cheerless and desolate may find comfort in these pages as well as those who rejoice in the little darling's affection. Trusting that *Healthy Mothers and Healthy Children* may afford comfort to all classes and carry joy, happiness and health into the millions of homes over our broad land is the sincerest wish of

THE AUTHOR

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CHAPTER I

SEXUAL ATTRIBUTES

Co-EXISTENT with life itself—from the earliest period of human existence to the present, obedient to the Divine command, designed to subserve one of the grandest purposes of nature, essential to the preservation and continuance of our race—are the sexual attributes of man.

Our first parents were created with the same physiological differences that characterize and distinguish the sexes today, and though they were created in a state of maturity there was engrafted upon their constitutions those self-same inherent properties that actuate mankind in the present, having been transmitted from parent to offspring through the process of generation.

What love is to the soul, the sexual attributes are to the physical part of man. Love is the rudimental element of the soul, the essence of the Almighty; sexual attributes, the medium through which the spirit essence is transmitted to and engrafted upon the physical being. Both are divine gifts, in perfect harmony with man's happiness and conducive to his enjoyment. "Love constitutes the foundation of human

nature;" it is the motive power, as it were, of our impulses, actuating, regulating, refining human character. "Sexuality implies reproduction" and, associated with love, is an instinct, the office of which is to repair the ravages of death by a continual transmission of life. The sexual passion is one of the most powerful impulses, and when subordinate to reason and love its purpose "is rather to subserve the object of continuing the species than merely its own gratification." "Sensuality is an unbridled desire which kills the soul." "It degrades love and brutalizes man."

Man is a rational being, endowed with reasoning powers, capable of comprehending his attributes and understanding the laws of their application. It is his *duty* to understand and observe whatever contributes to his happiness and avoid whatever may cause suffering and misery. Ignorance will not protect us from the penalties of broken laws.

It is by no means the author's wish to offend the fastidious or pander to depraved tastes, yet the conviction is constantly forced upon him that if the public were better instructed upon sexual questions far less suffering and crime would exist. "The proper study of mankind is man," and it is very appropriately said, "knowledge is safety." Reason instead of instinct should govern our acts. The attributes capable of contributing to our enjoyment as well as preserving our lives are too often perverted and abused, and thus become sources of pain and death. It is, therefore, proper that we understand these facts and live accordingly; *that we govern our passions instead of permitting them to govern us.* This we cannot do if we do not understand the relations between cause and effect.

If we are ignorant of the necessity of restraining our animal propensities and of keeping them within proper bounds, if we do not know their boundaries or if we are ignorant that we incur certain penalties if we overstep these boundaries we will be constantly liable to violate both divine and natural laws and be punished for the same, though at the same time not realize what we are being punished for. The majority of people blame Providence for their afflictions, while the truth is they have, though perhaps unwittingly, broken some law of their existence. It is not the author's intent to enter into the consideration of these laws and their effects in this work any farther than relates to the causes of pain in maternity and how to avoid them, yet he hopes these hints will lead the reader to investigate the *laws of life* and the penalties imposed for violating them.

Neither sex is complete in itself, but the diversity attracts the one to the other—to complete the one by union with the other. Neither alone is capable of transmitting life, and their union is necessary not only for the welfare of each other but also for the purpose of carrying out the divine command, "multiply and replenish the earth." This attraction of the sexes "is the basis of marriage and of the laws and customs which recognize the life-choice of one woman for one man."

When love is pure and true it does not find its complete satisfaction except in the indissoluble bond of marriage. Marriage is its natural consummation.

Before sexual union it is the man who loves the most earnestly, because he sacrifices more—pains, marches, contests; he spares nothing.

When the act is consummated, it is, in her turn, the woman

who loves more and for a longer time. Then her love becomes labor and suffering; she must nourish with her blood the being to which man has communicated life; she must bring it into the world in the midst of cruel pain; she must continue for it incessant cares.—*Bourgeios.*

Most observers concede that the sexual passion is stronger in men than in women; indeed, some women have none at all; and though the absence of this passion is in most cases the result of disease or the early abuse of this function there are cases met with in which sexual apathy is the only abnormal condition present. In such cases philoprogenitiveness may be perfectly developed, and I have met many cases of the kind where women have become mothers without experiencing any sexual emotion whatever.

There is another class in which a proper and natural degree of passion exists, while in still another though smaller class it exists in an unnatural degree, often amounting to *nymphomania,* a disease manifested by excessive erotic desires which are controlled with great difficulty, if at all. Those of the first class, incapable of experiencing the emotions that influence and control the latter, regard them with contempt and hatred, when pity would be far more proper. Fortunately, such abnormal conditions are amenable to proper therapeutic measures.

There should be neither passion, pleasure nor pain which is not shared by both sexes. Generation is a duty; "Children are a good and not an evil," and the feelings that impel to reproduction are as much a part of nature as is the hunger or thirst that prompts us to eat or drink. But it is a physiological fact that the moderate use of any function contributes to health,

longevity and enjoyment, while excessive indulgence is punished with physical ills.*

Although it is possible for conception to occur where no sexual passion is manifested, nevertheless it is true "that the disposition of the woman at that time has much power in the formation of the fœtus, both in modifying its physical constitution and in determining the character and temperament of its mind."

Her influence over the unborn does not by any means end with conception. For nine months she continues to impress upon it mental and physical characteristics that to a very great extent shape its future course and determine its usefulness in society. The moral influence of the mother must not be forgotten; for it is while the rudimental brain and nervous system are being developed that impressions are easiest made and most apt to remain. Small influences at this time may grow into great variations of character in future.

True, the impress of the father will be seen in the child, but it is during gestation that the fœtus is a part of the mother herself—"blood of her blood, bone of her bone" and, we may add, nerve of her nerve.

Circumstances that influence the life of the mother during this interesting period necessarily exert a similar influence upon the child in a greater or less degree. The stronger constitution of the mother may not be permanently impressed by external influences, while the child may be so affected that a life-time will not

*In this consideration, the author is desirous of being understood to mean reproduction, under such moral and social laws as govern the people where it takes place; it not being his intention to discuss monogamy, bigamy, polygamy or promiscuity in this work.

be long enough to efface them. Thus hereditary characteristics are transmitted and developed; thus antenatal influences shape the destiny of the unborn.

Excessive gratification of the sexual passions exhausts the vital and nervous forces, deranges the vegetative functions and lays the foundation of various diseases; and the diseases and physical conditions of the parents at the time of conception and during gestation will materially modify the constitutions of their offspring.

While the reproductive organs are not the seat of life, it is a well-established fact in physiology and pathology that they exert a most profound influence upon the performance of every function of the animal economy. Concerned as they are in the transmission of life, it is through them that vital and other characteristics are handed down to posterity, so that the welfare of the future generations depends materially upon their inheritance. Children born of parents suffering from diseases of these organs are generally defective in vital and other qualities, ill-tempered, sickly and short-lived.—*Baker.*

Children born of parents of fair intellectual qualities, but who have indulged their animal propensities to such an extent that they are suffering vital defects, will usually be bright, keen of perception, have large heads, but will be physically weak, fall easy victims to diseases of various kinds and in very many instances die under ten years of age. Sometimes the arts of the physician will avert those fatal tendencies of such constitutions, but were he able to do this far oftener than he is how much better would it be to know the laws that regulate such conditions, and by living in obedience to them avert the penalties of breaking them. Even though cures for diseases were always possible how much better it would be to prevent them.

Carry the question of vital transmission farther. Exhaust the vital qualities of the parents still more; set up the diseases that follow the breaking down of the system by excessive sexual indulgences, and the children will rarely have the redeeming qualities of the former class, but will be weak, idiotic, deformed and epileptic.

Certainly the highest and holiest duties of earth are consigned to woman; she is the one who moulds the physical form of her offspring and rears it to the stature of man and shapes its moral and intellectual destiny. The embryonic being draws nutriment and subsistence from its maternal parent and derives its vital impress from the parent stock. Loveliness begets loveliness; purity begets purity; wisdom begets wisdom; selfishness begets selfishness; hatred, hatred; bad temper, bad temper; licentiousness, licentiousness; crime, crime; etc., etc.

Excessive venereal indulgence, excessive child-bearing, excessive nursing are terribly destructive to the vital forces of woman's organization. * * * This slavish drudgery to maternal requirements is the cause of many distressing disorders, producing irritability of temper and all those domestic *contre-temps* which so often destroy the happiness of the family relation and bring odium and disgrace upon the marital institution designed by the ordinances of nature and heaven for the highest felicity of man and woman in a state of terrestrial existence.—*Pancoast.*

The influence of moderation in these matters cannot be overestimated. The evil influence of excesses are to be seen in both parent and child. As the excessive indulgences exhaust the vital forces, irritability is increased, the sensorium becomes more and more acute and trivial ills become severe pains or serious diseases, and the natural sensibility becomes so greatly exaggerated that the mother is subjected to continual agony both before and after birth.

The act of generation is a voluntary one, but nature has so placed it under the empire of pleasure that the voice of discretion is no longer heard and the will is led captive. Hence, it is well, for hygienic reasons, to consider its laws.

Too frequent repetition of the reproductive act is known to be followed by consequences injurious to the general health. Too rigid continence is not unattended in many constitutions with danger, for the victory over passion may be dearly bought. Science recommends the adoption of a wise mean between the two extremes equally destructive. By following her counsel, woman may escape from the hysterical and other disorders which often wait as well upon excesses as upon the too great demands of that passion which claims satisfaction as a natural right.—*Napheys.*

The interests of man and woman are the same. Their object is to promote their own happiness, to prolong their own lives and to perpetuate the race. The higher degree of perfection they attain, the greater their enjoyment, the greater their immunity from suffering. Pleasure should never be bought at the expense of pain. Each succeeding generation should be more perfect than its predecessor. Our race is susceptible of culture, but it cannot be trusted to chance.

Certain definite and well-regulated laws are in existence throughout the universe. These rules must be understood and obeyed. Obedience will be rewarded and transgression punished. The providence of God asks nothing unreasonable of us, nor will it be likely to suspend any of its rules to favor an erring mortal. Ignorance will not be accepted in extenuation of disobedience. The child that puts its tiny finger into the fire, ignorant of what the result will be, is as certainly burned as the older one who knows the consequences. The insane man leaps from a precipice and is dashed to pieces on the rocks below. He breaks the law of

gravity and pays the penalty with his life. The law of gravitation is not suspended because he is unaccountable for his act. So with all other natural laws.

Pain is the result of having broken some law. Had the law not been broken, the pain would not have been felt. These are facts. They look us squarely in the face. We may reason from cause to effect, from effect to cause, the result is the same. The question plainly presented to every individual is: Is immunity from pain and suffering worth the little effort required to prevent them? It is purposed in the following pages to consider some of the causes of pain, and teach prevention. As we improve our condition and knowledge, greater results may be anticipated, but we shall derive immediate benefit. Improvement is a forced state; if we relax our efforts we shall be extremely liable to retrograde.

We have shown that it is a fixed law that the capacities and dispositions of the parent are engrafted upon the offspring. Sick parents beget sickly children. Parents who keep their sexual functions in a state of excitement beget children that will be precocious in this direction. Consumptives beget consumptives. Venereal diseases descend through several generations, blighting the lives of many in the descent. Stock-raisers study the law of hereditary transmission, and is the human race of less consequence? All these considerations have a more or less direct bearing upon the pains and perils of child-bearing, and it is designed in the following pages to specify these causes, explain their operations, point out both preventives and remedies and render each woman capable of painless childbirth.

CHAPTER II

MATERNITY

The office of maternity is peculiarly that of woman, and is the highest and holiest to which she can aspire. Its attainment requires many sacrifices which she is ever ready to make, and she considers herself amply repaid for the pains and perils she has to undergo when she clasps to her breast her new-born babe, the culmination of her anxiety, the central object of her affections, to her the crowning blessing of earth.

Maternity is a legitimate object of woman's existence, to be attained only through the exercise of a certain function which, for the welfare of society, is not to be indulged outside of the marriage institution. For this reason, if for no other, the parties to a marriage contract should study the law of adaptation. Each party should possess good health, be free from any hereditary taint, and be by disposition prepared to reciprocate the love of each other. To love and be loved, to forgive and be forgiven is essential to the happiness of both.

Philoprogenitiveness or love of offspring is a faculty that "renders children the richest treasure of their

parents, and casts into the shade all the toil and expense they cause and lacerates them with bitter pangs when death or distance tears them asunder. It is much larger in woman than in man." The father may love his children earnestly, ardently, but it is different from the love of the mother. His affection may be turned away from them, but the love of the mother endureth to the end.

The intensity of a mother's love is manifested in the sacrifices she makes to secure her child's happiness. Perhaps forsaken by the father of her babe she struggles on alone in the world, careless alike of frowns and hardships, only intent upon its welfare. Dying, her last prayer is for her child.

She deprives herself of innumerable pleasures, foregoes the enjoyments of society, assumes the risks of unknown dangers, endures the pains of childbirth—many times suffering from the earliest period of gestation until long after delivery, to attain the joys of motherhood.

Maternity begins with conception and ends only with the grave. Maternal instincts may exist in early life, and in the barren, but she must pass through the process of gestation and undergo the ordeal of delivery—she must, in a word, become a mother—before she can fully realize what maternity means.

The adaptability of the female to the requirements of this important office is manifested very early in life—in childhood. While the boy plays with his ball, his horse and gun, manifests ambition, courage, power, exhibiting his aspirations to manhood, the little girl plays with her doll, imitates the matron and by word and act indicates her wishes for a "real baby" long

before she can possibly realize even in the slightest degree the difficulties and dangers the gratification of her desires imply.

Though it is through sexuality that maternity is to be attained, the maternal instinct is entirely distinct from the sexual impulse, and the realization of maternity is often experienced without any knowledge whatever of sexual gratification on the part of the mother.

Professor Laycock says:

Maternity is the first and fundamental duty of the female; the male never in a single instance, in any organism, contributes nutrient material.

Madame Sirrey says:

Those women who comprehend their rights and duties as mothers of families certainly cannot complain of their destiny.

The office of maternity is respected the world over. In ancient Rome, the house of the newly-made mother was designated by the suspension of wreaths over the door to prevent intrusion and as a mark of reverence. To encourage this holy office various countries have legislated in its favor and pensions have been awarded to women who have borne many children.

All women are not fitted for the duties and responsibilities of this holy office. There are a variety of circumstances that should be considered in contemplating maternity. When one or both parents are suffering from diseases that influence primarily their vitality and are liable to be transmitted to their progeny *they have no right* to bring beings into the world who must perpetuate the parents' misery by a life of continual suffering. Diseases or infirmities which

threaten directly the physical or moral life of the individual are propagated above all by generation.

The different forms of mania are liable to be aggravated by genital transmission. Epilepsy is liable to degenerate into cerebral maladies in the offspring. Consumption perpetuates itself in the race and may become contagious for the other parent. Uncured syphilis is transmitted through several generations. Improper temperamental alliances often develop disease among children where it had not been manifested in the parents. We should seek in marriage to neutralize by opposing constitutions, temperaments and predispositions the morbid hereditary elements which may be found in husband and wife. Marriage alliances should never be contracted between two persons who are essentially the same in temperament. We should seek to oppose the debility of one parent by a strong constitution in the other. When matrimonial contracts are formed contrary to the above rules the wife should sacrifice her maternal desires for the welfare of the being she would otherwise bring into the world, lest she entail upon the prospective object of affection a life of continuous misery. Among the lower animals the most studious care is taken to breed only from the very best quality of stock; quantity is sacrificed to quality; *and is the welfare of the human race of less importance?*

We contend that no parents have a right to beget more children than they can comfortably support, and we appeal to the nobler sentiments of our fellow men in support of our position. We assert that it is the privilege of every woman to control her maternal function—to say *when* she shall have children, and *how*

many. It does not follow because she is married that she shall be robbed of her health and every enjoyment in life, in compliance to the sexual behests of her companion; and no man of feeling, sense or decency will be willing to see the health, the beauty and the enjoyment of his wife sacrificed to excessive child-bearing.

A host of writers—medical and non-medical—are arrayed against the subjection of woman to the infamous laws of modern civilization which are *too* often upheld by religion. By the laws of our country it is a criminal offense to *procure* or aid in *procuring* or to instruct any woman by what *means* she can regulate the number of her offspring by preventing conception. Under this law she must beget children, even though she knows they must suffer and die of some hereditary malady. Under this law she must beget children and bring them up in poverty, and subject them to starvation, vice and crime. But one alternative is left, and that is the criminal one of *fœticide or child-murder!* Indeed, this law demands that she sacrifice health, happiness, principle, and even life, in obedience to the demands of this most infamous enactment, in the passage of which she had not even a minority vote.

Could the one single law of Providence governing reproduction be suspended or reversed, and every man be compelled to have just one child, even though they might have the benefit of the following rules, the first act of our next Legislature would be the repeal of this obnoxious law, *and every man would provide himself with a preventive.*

The distinguished writer, John Stuart Mill, says:

It is strange that intemperance in drink or any other appetite should be condemned so readily, when incontinence in this

respect should always meet not only with indulgence but praise. Little improvement can be expected in morality until the producing too large families is regarded with the same feeling as drunkenness or any other physical excess.

The eminent Raciborski, in taking the position that avoidance of offspring to a certain extent is not only legitimate but should be recommended as a measure of good, says:

We know how bitterly we shall be attacked for promulgating this doctrine, but if our ideas only render to society the services we expect of them we shall have effaced from the list of crimes the one most atrocious, without exception, that of child-murder—before or after birth—and we shall have poured a little happiness into the bosoms of despairing families where poverty is allied to the knowledge that offspring can be born only to prostitution and mendacity. The realization of such hopes will console us under the attacks upon our doctrines.

Dr. Edward Reich says:

After reviewing the multitudinous evils which result to individuals and society from the too rapid increase of families it is much to be wished that the functions of reproduction be placed under the dominion of the will.

Dr. Napheys remarks:

Men are very ready to find an excuse for self-indulgence, and if they cannot get one anywhere else they seek it in religion. They tell woman it is her duty to bear all the children she can.

In his work on *Fecundity, Fertility and Sterility*, Dr. Duncan, in considering the subject of the size of families, says:

Neither the arguments of Malthus, nor any others, apparently justify us in calling on a healthy couple to limit the number of their children when they will receive a fair education and such an outfit as will enable them to produce so much wealth by their labors as will probably insure them against want. It may well be doubted whether, for the sake of self-indulgence and with a little more wealth, such a couple would be justified in placing a

limit to the number of their children. But think of another and too frequent case. Think of a man and woman struggling with poverty absolute or relative, with more children already than they know how to educate, to clothe, even to feed! Think of the woman bowed with ill health, peevish from petty trials! Think of the children, each on its arrival regarded as a misfortune if not a curse, growing up unhealthy, ill-cared for, dirty, ignorant, with no better prospect than to repeat the life of its wretched parents! Would these parents do wrong in refusing to be instrumental in multiplying a race of paupers? Between these two extremes may not each man and woman ask themselves the question whether *any* duty obliges them to procreate children whose advent they will deplore?

Some may be shocked even at the question, regarding the births of children as the special intervention of Providence. We shall not quarrel with these persons, remembering what are the faculties and possible destiny of each child born; but we cannot refuse to see that Providence will not send children without some action on our part. There is no obligation binding on men and women to begin the begetting of children. Having begun, must they go on perforce? The argument as to interfering with Providence is quite disregarded now as to epidemics, and it is a little difficult to see the distinction between interfering to prevent excessive deaths and excessive births. Indeed, if we disturb the old balance by preventing a high death-rate, it seems almost incumbent on us to restore the equilibrium by diminishing the birth-rate. It seems a strange doctrine that we with our privilege of free-will, with reason, with religion for our guides shall be debarred all choice in this matter, and be reduced to a level with brute beasts, each species of which is limited by death and suffering alone. We wholly disagree with those who indulge their senses and expect Providence to protect them from the consequences of their incontinence.

I am convinced from careful study and extensive research that society or population would not suffer if the act of generation was wholly under the dominion of the will, for there are as many sterile women who desire children as there are fertile ones who wish to

avoid them. The force of this observation is more apparent when we assert that in about ninety-five per cent of cases of sterility the barrenness is caused by diseases, and may be corrected.

The intelligent and impartial consideration of the subject is necessary, and should be taught rudimentally in our schools, even though it were advisable to establish special schools for the purpose. The law against preventing conception does not regulate the number of illegitimate children nor diminish prostitution: for if the fear of conception is the only barrier the law opposes to the unlawful indulgence of the sexual propensities it is too feeble to merit a moment's thought. The immoral care nothing for it while, on the other hand, wives who cannot resist or evade the responsibilities are often compelled to beget offspring under circumstances of the most lamentable and cruel kind.

Had woman the possession of herself and the control of her maternal functions and duties, instead of grievous sufferings and privations, she would have health and beauty; not only of her own organization, but she would become the mother of children equally vigorous and lovely. Surely, nothing is more wicked than to bring into the world such numbers of helpless and innocent beings to doom them to poverty, ignorance and crime, because of their parents' inability to make necessary provision for them.—*Pancoast.*

I have no wish or intent to break any law nor encourage others to do so, no matter how unjust it may be, but for the sake of the oppressed I seriously hope the attention of legislators will be given to the matter and that it may receive proper scientific investigation.

The influence of the mother over the career of her child is immense, and it should be rightly directed. A noted divine has well said, "to be good mothers of

men and women is the greatest thing in all this world"; and we will add, the better the mothers the better the children in every respect, for

"The hand that rocks the cradle is the hand that rules the world."

Physical conditions may be cultivated, but the germs must first exist. It is difficult to give other than what we have or transmit what we do not possess.

It is a mistaken notion among many newly-married people that they do not want children. Many who have thought thus have had occasion to regret their folly, when later in life the wife finds herself permanently sterile or suffering from disease which the unphilosophical and unphysiological methods of preventing conception she has practiced, entail.

The age of the wife has an important bearing upon not only her health, her fertility and severity of labor, but upon the constitution of her offspring. Every man and woman should possess a plenitude of life before they communicate it to another. The body should have attained its growth for at least a year, and every function be fully and perfectly established. After puberty the pelvis of the female undergoes important anatomical changes to fit her for child-bearing. These changes require time (several years), and it is not until they are completed that she is fully qualified to perform her part in the process of reproduction.

Comparison of the skeletons of males and females after puberty shows a marked difference in their relative breadth and depth, that of the woman being greatest, for two reasons, viz.: The accommodation of certain organs which are peculiar to her alone and the easy expulsion of the fœtus when conception is completed.

The age at which this pelvic difference matures varies from twenty to twenty-five, and conjugal unions should not, on an average, be formed prior to the earliest period indicated. Between twenty-five and thirty is the period of the greatest fertility, and first confinements between these ages are least difficult and dangerous.

Aristotle observed:

To the female sex, premature wedlock is particularly dangerous, since, in consequence of anticipating the demands of nature, many of them suffer greatly in childbirth and are liable to produce imperfect offspring.

His observations are fully confirmed by writers of the present day. The children of such marriages are sickly, puny and defective in mind and body. They inherit more readily the defects of their ancestors and, as a rule, die at earlier years than the progeny of better-timed unions.

Dr. Naphey says:

A too youthful wife finds marriage not a pleasure, but a pain. Her nervous system is prostrated by it; she is more liable to weaknesses and diseases of the womb; and if of a consumptive family she runs great risk of finding that fatal malady manifested after a year or two of married life. It is very common for those who marry young to die young.

Admitting that there are many exceptions to this rule it is no argument in favor of early marriages, because there is nothing to be gained except in rare instances. It has been argued in favor of early marriages that uterine diseases in young girls are sometimes cured by it. The risk is too great, for in every case where one has been benefited hundreds have been made worse. My own observations of the results of early marriages conform to the foregoing. Many

mothers have suffered from uterine and nervous diseases while their children have possessed puny constitutions.

On the other hand, marriages late in life are equally objectionable. Barrenness is more frequent after thirty, while the first labors after that age are apt to be more protracted and dangerous. The farther this period has passed the more rare first births become, and at forty-six the child-bearing period of woman ceases entirely, though some notable exceptions have been known.

CHAPTER III

IS PAIN NECESSARY?

To the child-bearing woman, few questions are of greater import, and it is to be hoped the writer will be able to convince his readers that the question may be truthfully answered in the negative.

When we observe the little suffering the lower animals experience in bringing forth their young we are at once led to inquire: Is it necessary that the human female created in the image of God should suffer as she does in childbirth? Why is *she* specially selected to endure such agony? Can the Almighty have any special design in afflicting her thus?

Physiologists tell us that the healthy performance of any function is unattended with pain; that natural processes are painless and that pain is the result of a morbid condition. It is conceded that child-bearing being necessary to the perpetuation of our species is the natural function of woman; consequently, if we accept the doctrines of physiology, we can only infer that *childbirth should be without peril* AND WITHOUT PAIN.

We cannot believe that the Almighty ever intended woman should suffer such terrible misery, while her

male companion equally interested in its results should wholly escape. If such be the design and it is necessary then why do some suffer so much more than others? If the descendants of Adam are enabled by any means to practically escape the curse pronounced in the garden, why not the descendants of Eve?

This may seem sacrilegious to those who are ever ready to blame Providence for their mishaps; but while we respect the opinions of all we cannot help noticing that those who are the most ready to attribute to the dispensation of Providence all their ills are generally very prompt in seeking human interposition to mitigate the suffering occasioned by such special dispensation. A genuine attack of colic or cholera morbus will take the special dispensation doctrine out of a man in very short order; and though he may pray for another special dispensation to relieve him he is generally anxious that a speedy messenger be dispatched for a doctor about the same time; and what is colic or cholera morbus in comparison with the pains of childbirth? Let those who have experienced both answer. If it is right to relieve the pains of one by human efforts is it not right to relieve or prevent the agony of the other?

The truth is, Providence is no more to blame for the suffering of one individual than of another, and will not suspend or reverse any law to accommodate anybody. We are born subject to certain organic laws, and if through wilfulness or ignorance we violate them we must suffer the consequences. Providence is no more to blame for disease and pain than for picking of pockets or stealing horses. We have charge of our constitutions, and if we will not learn how to care for

them—learn how to prevent disease and pain—we must suffer, and no interposition of the Almighty need be expected, nor will the plea of ignorance be accepted in extenuation.

For our part we cannot believe the Almighty the cruel, merciless tyrant many picture Him, but believe in His wisdom, mercy and justice. He has placed at our disposal abundant means for our relief if we will but comprehend and apply them.

It is not our purpose, however, to discuss the pain question upon its theological merits, still if there is the efficacy in prayer that has been accorded to it the pains of childbirth are a consequence of the curse uttered in Genesis 3 : 16-17; and if the purposes of the Almighty are ever changed it would seem that there have already been prayers enough offered for woman's deliverance to have effected it, for certainly she has suffered enough to satisfy the devil, much less a God.

Perhaps some enthusiastic Malthusian will set up the claim that the pains and perils of childbirth are necessary to constitute a check upon over-population. If that is the case, it would appear that after being tested six thousand years and proving a failure it is about time the plan was abandoned and some other one tried.

It is very evident that all women do not experience the same degree of suffering, and we infer there must be some good reason for the difference. Every effect must have a cause, and the question arises: Are we not capable of ascertaining the reason why some suffer less than others and, by applying the same conditions to all, ameliorate the suffering of all?

Travelers tell us that the females of uncivilized nations suffer less in childbirth than those of civilized, and we cannot entertain the idea that the heathen mother is more a favorite in sight of heaven than her Christian sister. Hence, some other explanation is necessary, and we come to believe that the difficult, painful and tedious labors are due to some physical condition of civilized woman which the uncivilized escape.

The uterus is a hollow, muscular organ that gradually enlarges as gestation goes forward until the termination of pregnancy when, for certain reasons unnecessary to consider in this connection, it contracts and after repeated efforts expels its contents amidst intense suffering.

The heart is a hollow, muscular organ that by its alternate expansion or dilation and contraction receives the blood from the veins and sends it coursing again through the arteries to every part of the body. Its contractions are forcible and represent an amount of muscular power immensely greater than the uterus.

The stomach is also a hollow, muscular organ that by its contractions and motions churns, mixes and comminutes its contents until prepared for expulsion.

The bladder is another hollow, muscular organ that dilates slowly as the urine accumulates within its cavity until a certain degree of distention is reached, when it contracts and the urine is expelled.

All of these organs are supplied with nerves of sensation, yet they perform their natural functions without pain.

The general structure of the uterus is similar to the other organs mentioned and expels its contents by

contractions in a manner similar to the others; then why should its operations be attended with pain and the others escape? This reason is plain. The heart, stomach and bladder are in a healthy condition, and in that condition not sensitive to pain. Let them become affected by disease and every contraction they make is performed in agony.

In dyspepsia the stomach becomes diseased and the dyspeptic knows what it is to suffer; yet he does not believe his pain is necessary and quietly submit to it without an effort to effect a cure.

Inflammation and other diseases of the heart create intense suffering and disturb every function of the body.

When irritation or inflammation of the bladder occur, every contraction is attended with the most excruciating agony.

Thus it must be apparent that when these organs are in a healthy condition their functions are painless and are performed in an almost unconscious manner; but, when a pathological state is developed, agony is the result.

From this we rationally infer that the reason the contractions of the womb are attended with pain is because some morbid condition of it or adjacent structures exists.

All accouchers have remarked that cases are often met where the contractions of the womb are prolonged and vigorous, and yet the woman will complain very little. From this we are led to infer that the anatomical construction of the parts is favorable to the process, and that the uterus and its attachments have not been rendered sensitive by morbid conditions. A healthy

uterus is not sensitive, and parturition should be painless.

The eminent obstetrician, Dr. Dewes, argues:

Pain in childbirth is a morbid symptom; that it is a perversion of nature caused by modes of living not consistent with the most healthy condition of the system, and that such a regimen as should insure such a completely healthy condition might be counted on with certainty to do away with such pain.

Prof. Huxley says:

We are, indeed, fully prepared to believe that the bearing of children may and ought to become as free from danger and disability to the civilized woman as to the savage.

Pancoast, in his *Ladies' Medical Guide,* says:

It is a common belief that gestation is a period of disease and suffering, and that parturition is inevitably a painful and dangerous process. Now the great truth yet to be learned is the reverse of such impression. It is just as natural for a woman to bring forth children as for a shrub to produce flowers and fruit. In a state of health no natural process is painful. Pain, in all cases, is a sign of disease—it has no other significance. In its healthy condition the uterus receives the germ of a new being, provides it with proper nourishment, expands to make room for its development and, at the time appointed by nature, dilates its opening and contracts—a series of involuntary and painless muscular efforts—so as to throw the infant into the new existence which its growth demands. It performs its own proper functions, just as the lungs, the heart or the stomach perform theirs, because it was formed by the same Infinite Wisdom and Goodness who ordained that pain and sorrow should be the consequences of sin and who ordains that health and happiness shall ever be the result of obedience to the laws of life.

It is well known that the slave women of this country required very little or no attention at confinement.

Their labors are generally of short duration, the pain moderate and the woman is incapacitated from performing her usual avocations only a few hours.

Among the poorer classes, *i. e.*, those who are robust but compelled to depend upon their daily toil for the necessities of life—the plainest food—to whom luxury is a stranger we often find the labor easy and speedy and often with no attendant, except, perhaps, the husband or a little girl—not even a midwife. The woman gives birth and in a few hours resumes her usual duties.

It is generally known among the American Indians that the avocations of the squaws are seldom, if ever, interrupted by an inconvenience from pregnancy or labor, except for a very short period at the time of birth. My brother-in-law, Dr. S. T. Baker, who has spent many years on the western frontier among the Indians, where he had excellent opportunities to observe and acquaint himself with their habits, assures me that a pregnant squaw does not occasion any concern from her companions. She performs the usual drudgery of her life up to the very hour of her labor, making no preparation for the coming "pappoose." When she realizes that the hour for delivery is at hand she enters her cabin or betakes herself to some stream or spring, gives birth, washes the young "Injun" in the cold water, straps it upon her back and before she has been scarcely missed has returned a full-fledged mother and resumes her labors unconscious of having undergone any very wonderful ordeal. If the band to which she belongs is on a march when she feels that labor is upon her she leaves the trail and beside some brook or spring spreads her blanket, is delivered, washes the infant, straps it upon her back, mounts her pony, gallops on after the rest, whom she overtakes after one or two hours' absence. If they experience any of the

annoyances of pregnancy that afflict the daughters of artificial life they pay so little attention to them as to attract no notice whatever.

Caseaux remarks:

There are certain females who have the happy privilege of being delivered without any or, at least, very inconsiderable pain. I had the opportunity at the *clinique* of observing a young woman in her first labor who was aroused by the pains at four o'clock in the morning and was delivered at six. During these two hours she suffered so little that she did not consider it necessary to alarm anyone until the pains became a little more severe, when the midwife was summoned and found the head had been delivered.

Nearly all physicians can recall cases in their experience when, having been hastily summoned, they have found on their arrival a few minutes later that delivery was completed and that they had been summoned as soon as the woman herself realized that the labor had begun.

In an English work on midwifery we find the following statements:

That a respectable lady, the wife of a peer, was actually delivered once in her sleep. In another instance a woman bore eight children without ever having labor pains, and her deliveries were so sudden and devoid of sensible effort that, in more than one instance, they took place under very awkward circumstances.

While practicing medicine in the eastern part of this state (New York) several years ago I was called several miles into the country to attend a case of obstetrics. On my arrival the husband informed me that his wife was not much sick and that he guessed that it was a false alarm. As it was storming violently and was near the dinner hour I concluded to have my horse cared for and get dinner myself before my return,

whether it was necessary to stay longer or not. On entering the house I found the wife assisting in getting dinner which was nearly ready. She remarked she was sorry to have called me out in such a storm for nothing. Dinner over, she resumed her household duties, but suddenly sitting down in a chair remarked that it was not a "false alarm" after all. We assisted her upon a bed as quickly as possible and in less than five minutes from the time she called her husband the child was born. The afterbirth was soon delivered and a good recovery followed. She assured me she had not experienced any pain.

Such cases could be indefinitely multiplied, did space permit or if it were necessary, but admitting them to be exceptional cases *they prove the possibility of painless childbirth.*

We know there are many authors who regard pain as essential to childbirth and think women must ever suffer as she does now; and we have been not a little surprised in examining obstetrical literature to find how little attention has been paid to considering the causes of pain or to any effort toward prevention. The idea of making childbirth easy seems to have been wholly overlooked in the endeavors to develop means to relieve difficult labors. Evidently they have regarded this grand function of the uterine system a pathological instead of physiological process.

The duration of labor is a subject upon which considerable difference of opinion prevails. On account of the change the abdomen and its contents undergo at the time, the delivery should not be so quick but that the contractions of the abdominal muscles may have time to adapt themselves to the change, and from

one to three hours is not too long. This, however, is a much shorter time than is usually occupied, and labor is said to be "natural" when it lasts from six to thirty-six hours and the woman kept in bed two or three weeks. The dangers to be apprehended from too rapid delivery are rupture of the perineum, flooding or syncope.

From the foregoing it must be evident to the unprejudiced mind that childbirth is a natural process when the mother lives in accordance with the laws of health.

Natural labor is an easy, short and painless act.

Natural labor is never painful.

The organic nerves that supply the uterus are never sensitive in a healthy state.

Irritation, debility, congestion and inflammation render these nerves sensitive and painful.

All pain, difficulty and danger are the consequences of violating natural laws.

Banish disease, enforce hygiene, establish health, and labor will not be difficult.

All of these assertions will be proven as we proceed, and full directions for relieving the pain or of preventing it will be given that will convince those who try it that pain in childbirth is unnecessary.

CHAPTER IV

CAUSES OF PAIN

The causes of pain at childbirth are various and may depend upon the condition of the mother or upon the condition of the child. These causes may be either remote or proximate, direct or indirect. In some cases the causes will have ceased long ago, but their effects will remain.

Unhygienic customs beget morbid conditions and thus render natural processes painful. Any cause that can retard or oppose delivery and protract labor increases the suffering of the mother and, if continued beyond a certain point, endangers the life of both mother and child.

Childbirth to be proper and painless requires that the shape of the mother be perfect; every organ must be developed and the pelvic bones be anatomically correct in shape. No deformity is admissible. The distance from the junction of the pubic bones to the sacrum must be sufficient to permit the passage of the child without too great a degree of pressure. There must not be any unnatural obstructions. The abdominal, pelvic and uterine muscles must possess sufficient power that they may complete the process without

undue delay when expulsive efforts begin. The nervous system must be quiet and the mind must be at ease. Every tissue must be healthy; no morbid conditions present. Then the child must not be deformed, too large, nor its bones too much ossified. Secure these conditions and labor will be materially shortened in duration and the suffering reduced to a minimum.

Modern social customs impose upon woman artificial modes of life that impair her constitutional vigor, deform her body, pervert her functions, render her an easy prey to uterine diseases and to prolonged and painful childbirth. These customs are indirect or remote causes of pain, because they create conditions of life which, in their turn, render pain unavoidable. The uncivilized mother uninfluenced by fashion, with the abdominal and pelvic muscles well developed by the exercises to which her life subjects her, her hips broad and deep to support the burdens she must often carry, her nervous system not rendered acutely sensitive by debility or disease almost entirely escapes the pains and perils of childbirth to which the society woman falls a victim.

Bring the matter nearer home, and let us compare the slavery of the two classes—the one woman a slave to fashion and society, the other a slave to physical necessity. The first, malformed by dress, the muscles undeveloped and the sensory nerves made intensely sensitive by disease and her manner of life, suffers long and severely at such times, while the other, well formed by nature, developed by the exercises her position in life necessitates, with no irritable or inflamed nerves to annoy her, pays no attention to it further than the

inconvenience occasioned by a few days' absence from work and the additional tax upon her resources for the maintenance of her child. Again, during pregnancy and probably for some weeks after delivery, the suffering of the fashionable woman has been continuous, while the other has scarcely noticed her condition.

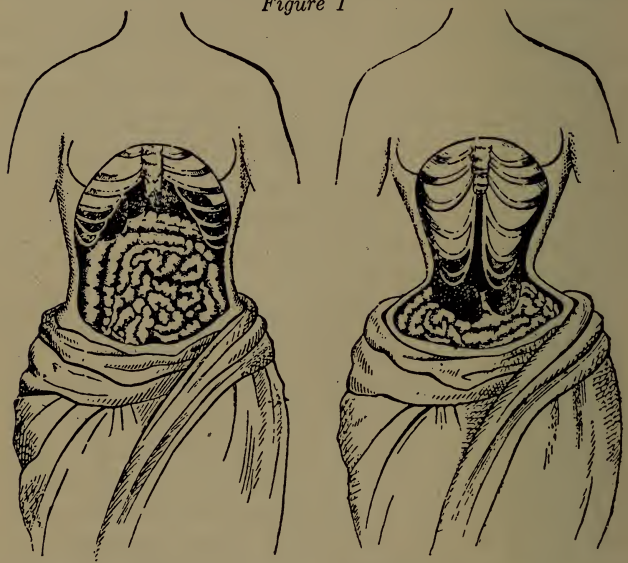
There is a noticeable difference in the degree of the anterior curvature of the spinal column at its lumbar portion, between the lower ribs and the hips, in the two classes of women—the society lady's back bending inward or forward considerably the most, so that the power of the vertebral pile to support weight from above downward with ease is diminished on account of the greater angle, giving rise to the sensation of "backache as if it would break in two."

This is one of the results of tight-lacing and insufficient physical culture, and to anyone who will consider physical laws its influence in producing female diseases, in prolonging labor and increasing its pain must be obvious. This increased curvature throws the abdomen forward beyond the direct line of the body and, in childbirth, much of the abdominal muscular effort, particularly of the diaphragm, is lost, because it is expended in the direction of a line with the pubic bones instead of the cavity behind them, the pubic bones opposing a force that no muscular effort can overcome, even were such a result desirable. In such cases the labor is protracted on account of the improper direction of the muscular force which is often feeble on account of the customary inactivity of the muscles preventing their natural development.

The woman who in her daily labors is compelled to perform such exercises as develop all her muscles,

particularly the erector muscles of the spine, to support the heavy weight she is often obliged to carry, by developing a natural condition prevents the extra curvature the other sustains, so that when labor comes upon her the abdominal muscles acting in harmony

Figure 1



Position of organs in women with natural waist.

Position of organs in women with waist deformed by tight lacing.

with the efforts of the uterus, effect an easy and quick birth, because no force nor effort is lost by being directed in a line deviating from the direction the child must take to make its exit.

Another way in which tight-lacing becomes a cause of painful childbirth is by confining the movements of the diaphragm so as to enfeeble it; at the same time

the abdominal viscera are compressed into a space too small for the healthy performance of their functions, and being prevented from escaping upward naturally gravitate downward and by their pressure displace the organs of the lower abdomen into the pelvis. The circulation is thus rendered defective, and the vitality of the pelvic organs being impaired they become congested, sore, tender, irritable, painful, diseased—a condition of things that necessarily causes pain at childbirth.

Deformities of the bony structures of the pelvis necessarily increase suffering and imperil the lives of both mother and child in a direct ratio with the degree of deformity. In such cases child-bearing should not be attempted, for when the deformity is so great that instrumental delivery is impossible but one of two alternatives remain: Embryotomy or Cæsarean section—the first of which sacrifices the child, and the second is pretty certain to sacrifice the mother.

Tumors within the pelvis retard and endanger delivery according to their situation, size and structure, and if they involve or press upon nerve filaments they occasion very great agony. Their removal must be effected before delivery.

Inflammatory diseases of the womb necessarily increase the suffering. This organ is profusely supplied with nerves which are involved in the inflammatory process, and thus become acutely sensitive, as every woman who has been affected by it can testify. It is so sore and tender that the slightest touch is painful, much less the severe efforts of parturition. Inflammation also gives rise to another source of pain, a change in the structure of the tissue inflamed by which

its elasticity is greatly diminished. Occurring in the neck of the womb it is easy to see how this may cause pain by interfering with the dilation of the mouth of the womb—a condition that must take place before the birth can occur. In its natural state the circular muscular fibres that exist here are capable of great distention, but when rendered inelastic by the products of inflammation the dilation is intensely painful and may rupture the fibres.

The employment of caustics and incisions in the neck of the womb for the cure of disease or removal of strictures is apt to be followed by cicatrices which, being inelastic, are liable to unequal dilation and an increase of pain. Necessary as these practices may be they are certainly open to this objection, high authorities to the contrary notwithstanding. Anyone having a scar or cicatrix on their person knows that it will not stretch like other tissues and is often very sensitive. Some writers have labored hard to prove that the tissues of the uterus were not subject to the same laws as tissues in other parts of the body and, consequently, the results of inflammation, caustics and incisions would not affect the womb unfavorably, but it is certainly presuming very much upon the healing power of nature, to say the least.

Any cause that can render any part of the generative apparatus sore, sensitive and tender, whether inflammation, ulceration, swellings, common leucorrhoea, diseases of the bladder, piles and, in fact, anything that impairs the integrity of any tissue, whether of the generative organs themselves or adjacent structures, necessarily increases the suffering at the time of birth. Undue dryness of the passages may also be

Figure 2

The Muscular System

1 and 2, muscles of upper part and side of head; 3, muscles of the eye; 4, muscles of the mouth; 5, muscles of the side of the face; 6, muscles of the side of the neck; 8, muscles of the breast; 9, muscles of the shoulder; 10 and 11, muscles of the upper arm; 12-19 muscles of the forearm; 17, avicular ligament of wrist; 18, 19, 20, muscles forming front and sides of abdomen; 21, hip muscles; 22, 23, 24, muscles of front and outer side of thigh; 28, 29, 30, muscles of inner side of thigh; 25, 26, muscles of outer side of leg; 31, 32, muscles of inner side of leg; 27, bandlike ligament of ankle.

considered a cause, and can usually be overcome by artificial means. Any emollient or unirritating oily substance applied freely will answer.

Anything that increases morbid irritability increases the suffering, which may be rendered intensely acute even though not the slightest change of structure be visible. This increased sensibility is probably due to some change in the nerves themselves which, in the present state of pathology, we are not able to appreciate. One thing, however, is certain; that morbid irritability is a concomitant of exhaustion, and if the nervous system has been debilitated and irritated by masturbation or sexual excesses an increase of suffering will be pretty likely to occur.

Rigidity of the perineal muscles is apt to cause pain in the latter stages of the labor. Sometimes the rigidity is so great that the perineum will rupture instead of relax, for the prevention of which slight superficial incisions have been recommended. In this condition, anaesthetics are beneficial and so are relaxants, if the management previous to this time has not been proper or effectual. (See subsequent chapters.)

From the time when labor begins until it terminates there is usually more or less continuous suffering of variable intensity, so that speedy delivery is desirable as a means of ending the suffering. The labor, however, should not be so short as to occasion the dangers alluded to in a previous chapter.

The condition of the child as a cause of pain remains to be considered and is of the very greatest importance, because we have it in our power to control the condition of which we are about to speak without danger or detriment to the child or mother.

The average weight of the newly-born child is said to be seven pounds—some are considerably smaller, others much larger. I have seen children live and thrive that did not exceed five pounds, and I have been present at several confinements when the child's weight exceeded ten pounds, and one instance when the child weighed fifteen pounds. Births are said to have occurred when the child has weighed eighteen pounds, but such instances are exceedingly rare and must certainly be difficult and painful. The reasons are obvious.

Beyond a certain size, as the weight of the child increases under ordinary circumstances, the pain and difficulty of the labor increases. Dropsy of the head increases the trouble. Wherever the head will pass, if there is no deformity, the rest of the body will pass, the passage of the fœtal head always being the most difficult and painful part of the entire process of parturition. The larger the child, of course, the larger the head will naturally be, so that it is a proper consideration to inquire how we may, with safety to both mother and child, control the growth of the child *in utero*, and we introduce the subject here because it has a direct bearing upon the suffering of the mother. It requires no argument to convince anyone that while a small child may be born with little or no difficulty or pain, the same mother may find it absolutely impossible to give birth to a large child—to a child with a large head or a deformed child.

We now come to consider the bony development of the child as a cause of pain and difficulty at childbirth. It is often a subject of remark that the formation of bone in the skulls of some infants at birth is not

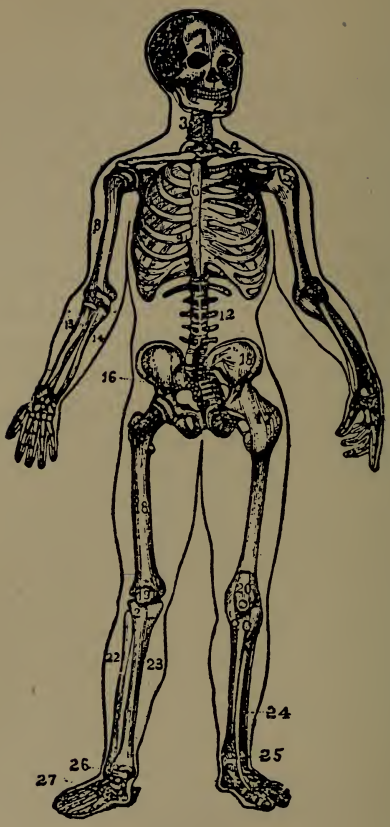


Figure 3

The Skeleton and Outline of the Body

1, skull; 2, lower jaw; 3, vertebrae of neck; 4, collar bone (clavicle); 5, shoulder joint; 6, breast bone (sternum); 8, humerus or bone of upper arm; 9, ribs; 12, spinal column; 13, the radius or large bone of forearm; 14, the ulna or small bone of forearm; 15, the hip bone; 16, lower part of spinal column; 17, hip joint with its ligaments; 18, the femur or thigh bone; 19, the knee cap or patella; 20 and 21, the knee joints with their ligaments; 22 and 24, fibula, or small bone of leg; 23, tibia, or large bone of leg; 25, 26 and 27, ligaments of ankle and feet.

nearly as far advanced as in others, and yet such children thrive equally well.

At birth the bones of the cranium have not been united by the ossific process, but admit of considerable mobility, so that by pressure the shape of the head may be materially changed, temporarily, without injury. Applying these observations to the transit of the child through the maternal passages, and we speedily arrive at the conclusion that the softer, more spongy, cartilaginous these bones are at birth the more compressible the head will be and the more readily it will adapt itself to the passage, changing according to the necessity, while if the process of ossification—bony development—is well advanced, such adaptability cannot take place, the labor will be more difficult, greater pressure will be necessary and more pain experienced.

Everybody is well aware that a soft body or substance the same size as a hard one will readily pass through an opening or tube through which the hard body cannot pass at all or only with great difficulty.

In the early stage of development, bones are soft and flexible, being composed of animal matter (gristle) but gradually become hard by the deposits of calcareous matter (lime) within their structure. All bones do not undergo this hardening process simultaneously, but it is completed in different bones at different periods of life. There seems to be no good reason why the bony system should have progressed beyond the cartilaginous stage of development at birth, for there is plenty of time after this event for osseous development before any very great necessity for the presence of bone will be experienced by the child.

It is a well-established fact in physiology and therapeutics that when bony development is tardy and the bones are incapable of supporting the weight of the body, protecting its cavities or preserving its symmetry, even when the process of teething is delayed, the administration of some of the preparations of lime as a medicine or the selection of a diet containing considerable lime is productive of good results. The lime administered artificially as medicine or naturally as a food supplies the deficient constructive element, and the development of bones goes on to completion. This being the case the questions naturally arise:

If we can increase the supply of bone-producing material when deficient, can we not diminish it if excessive?

If we can hasten development, can we not retard it?

If we can retard it after birth, can we not before birth?

If we can retard ossification before birth, then why can we not absolutely control the condition of the child's head and keep the bones sufficiently flexible to admit of easy delivery?

All these queries can be answered in the affirmative. Experiment has proven that such results are not only possible, but that they are safe and practicable.

Nervous excitement may be a cause of pain. It is well known that some persons suffer far more from the same cause than others, and it is reasonable to suppose that the more nervous the woman is during gestation and delivery the more intensely she will suffer. It is those who lead artificial lives or those whose constitutions have been shattered by disease that are troubled with "nervousness" and, if no precautions are taken,

it is reasonable to expect that such persons will suffer most at childbirth.

Having briefly considered the most important causes of pain, in the subsequent chapters we shall endeavor to instruct the reader how to render these causes inoperative and to remove the parturient female from their influence.

CHAPTER V

CONCEPTION AND PREGNANCY

The union of the male generative element—the spermatozoid—with the matured female ovum or egg is known as conception, fecundation, fertilization, impregnation. In the ovum as soon as fertilization occurs there begins a series of wonderful changes that result in the formation of a new being—the baby; every organ and tissue of the expectant mother is also gradually prepared for the new duty of reproduction. The limits of our book will not allow a minute description of these changes and we must, therefore, content ourselves with a brief consideration of the most important ones. They will be most easily understood if taken up in the following order:

1. The ovum (embryo, fœtus).
2. Local changes—uterus, breasts, abdomen.
3. General changes—heart, blood, lungs, urine, stomach, weight, skin, nerves.

Changes in the Ovum:

First Month.—Starting as a tiny, gelatinous mass that can hardly be seen with the naked eye, the ovum at the end of the first month is about the size of a pigeon's egg. (Fig. 3)

SECOND MONTH.—The ovum is as large as a hen's egg, and the embryo or fœtus about 1½ inches long. The eyes look like small black specks on the side of the head and the limbs like little buds projecting from the body.

Figure 4

Semi-diagrammatic section of gravid uterus, showing contained ovum of about five weeks. 1, muscular wall of womb; 2, cavity of womb; 3, wall of womb; 4, cavity of womb; 5, neck of womb.

THIRD MONTH.—The ovum is about the size of a goose egg, the fœtus 3 to 3½ inches long. The placenta has formed and the cord is about 3 inches long.

FOURTH MONTH.—Length 5 to 6 inches; weight 4 to 6 ounces. Hair appears on the scalp and scale-like nails on the fingers and toes. The sex can be

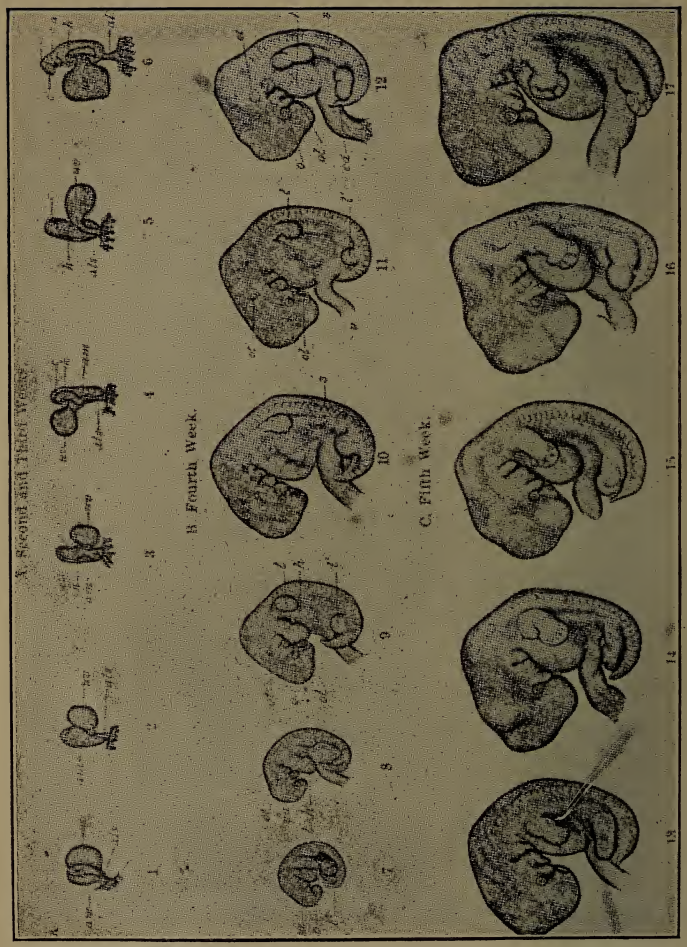


Figure 5

Early human embryos, all enlarged about two and one half times. *1*-4 from twelfth to fifteenth day; 5, 6, from eighteenth to twenty-first day; 7, 8, from twenty-third to twenty-fifth day; 9-12, from twenty-seventh to thirtieth day; 13-17, from thirty-first to thirty-fourth day; *am*, amnion; *uv*, umbilical or vitelline vesicle; *als*, allantoic or abdominal stalk; *c c*, brain vesicles; *h*, heart; *va*, visceral arches; *o*, optic vesicle; *ot*, optic vesicle; *ol*, olfactory pit; *l*, *l*, upper and lower extremities; *s*, somites; *cd*, caudal process; *u*, primitive umbilical cord.

distinguished by the middle of the fourth month. The muscles have sufficiently developed to cause slight movements of the limbs (fœtal movements, quickening).

FIFTH MONTH.—Length about 10 inches; weight 10 ounces. The whole body is covered with fine, soft hair (lanugo) and the skin coated with a greasy substance known as vernix caseosa. A child born at the end of the fifth month may breathe and cry and move its limbs, but usually dies in a few hours.

SIXTH MONTH.—Length 12 inches; weight 1 pound. Eyelashes and eyebrows have started to form; skin is very wrinkled. If born at the end of the sixth month the child may live for a few days, but usually dies within a very short time.

SEVENTH MONTH.—Length 15 inches; weight 3 to 4 pounds. This is known as the viable age, because it is generally held that a child born before this time cannot survive. But with the aid of the incubator and scientific artificial feeding we are now able to save the lives of many babies born even earlier than this.

EIGHTH MONTH.—Length 16 inches; weight 4 to 5 pounds. An eighth-month baby is usually weaker, less active and more drowsy than a full-term child and, therefore, requires greater care and attention.

NINTH MONTH.—The full-term baby weighs on the average from 6 to 7 pounds and measures about 20 inches in length. The body is plump, the hair on the scalp 1 to 2 inches long, the eyes usually of a dark steel gray color, the finger nails extend beyond the finger tips. Very soon after its entrance

into the world the child, by loud and lusty cries and active movements of the limbs, announces its arrival and shows that it is very much alive.

ATTITUDE OR POSITION OF CHILD IN THE WOMB

During its life in the womb the child lies head downward (Fig. 4), the body curved, the chin bent upon the breast, the forearms crossed in front of the chest, the legs flexed on the thighs and the thighs drawn up on the abdomen. In the space thus formed between

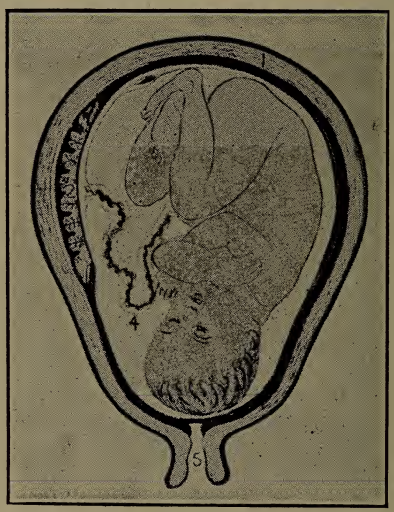


Figure 6

Semi-diagrammatic section of uterus, showing relations of fœtal and maternal placenta. 1, muscular wall of womb; 2, placenta (afterbirth); 3, cord; 4, bag of waters; 5, neck of womb.

the legs and arms the cord containing the bloodvessels that carry food and life-giving blood to the developing child is placed so that it may be out of harm's way and not pressed upon or otherwise injured.

Boy babies are as a rule heavier and longer than girls. Ten-pound babies are uncommon and twelve-pounders rare, notwithstanding many reports to the contrary. It is, however, recorded that Mrs. Captain Bates, a Nova Scotian giantess, gave birth to a child (still-born) that weighed 23¾ pounds.

A mother's first child usually weighs less than those she bears subsequently. Mothers between 30 and 35 years of age have the heaviest children—young mothers the smallest and lightest.

LOCAL CHANGES

a. The Uterus.

From a small, pear-shaped organ about 2½ inches long and one ounce in weight the uterus or womb at the end of pregnancy has grown to be a big, muscular sac, 12 to 15 inches long and weighing about 2 pounds. Every element that goes to make up the structure of the womb takes part in this growth. The bloodvessels, nerves, lymphatics and mucus membranes become bigger and larger, and the muscular fibres are so increased in both size and number that at the time of childbirth the womb has become such a strong, powerful organ that it is able by the contractions of its muscles to expel both child and afterbirth easily and gently, just as nature intended.

b. The Breasts.

During pregnancy the breasts are prepared by Mother Nature for the very important duty they must perform after the baby comes into the world. A feeling of uneasiness or fullness of the breasts, with a little tenderness of the nipples is experienced by some women almost at the very start of pregnancy. The breasts begin to enlarge in the second month and grow steadily

Figure 7

until the end of gestation. The nipples, unless flattened as a result of tight corsets or other pressure, become larger and more prominent and often covered with small, branny scales. The areola or pigmented ring around the nipple becomes darker in color, the shade or tint varying according to the woman's complexion from a light brown in blondes to a deep black in brunettes. The areola also becomes moist and slightly raised and on its surface are seen from ten to twenty glands—the glands of Montgomery—that look like little seeds under the skin. In some women at about the fifth month there appears on the edge of the areola a row of round spots lighter in color than the surrounding skin; this is called the secondary areola. As the breasts become fuller and larger, reddish, bluish or whitish lines form in the skin—these are the lineae abicantes or striae and are exactly similar to those

found on the abdomen of pregnant women. The blue veins can be easily seen coursing through the skin, and when they are big and tortuous are declared by many to prophesy an abundant supply of milk. In the last few weeks of pregnancy the breasts often droop a little, so as to be better adapted for suckling. In many cases even as early as the third month it is possible to press or squeeze from the breasts a little mucoid fluid known as colostrum. The presence of this fluid in the breasts is often a very valuable sign in the diagnosis of pregnancy.

c. The Abdomen, Pelvic Cartilages and Navel.

In the later weeks of pregnancy, reddish or bluish streaks—striae gravidarum—are found in the skin of the abdomen. They are due simply to stretching of the skin and may also result from tumors, dropsy and other causes. They last for quite a while after pregnancy, but gradually become whiter and look like scars.

d. The Cartilages between the bones of the pelvis become thicker and softer to allow them to spread and expand at the time of delivery.

The navel at the end of pregnancy is prominent and elevated.

GENERAL CHANGES

Though pregnancy is a normal physiological process, almost every organ and tissue of the woman's body undergoes changes, because she must now provide nutriment, breathe, excrete and secrete not only for herself but also for her unborn babe.

a. The heart becomes slightly enlarged and the pulse more rapid. More blood is formed and it coagulates or clots more readily—a wise precaution of nature to prevent unnecessary hemorrhage at confinement.

b. The shortness of breath so distressing to many pregnant women is caused by the enlarged and growing uterus preventing full expansion of the lungs. In the last two or three weeks the child settles—lightening—and breathing becomes freer and easier.

c. A greater quantity of urine is passed and it often contains traces of sugar or albumen. During pregnancy the urine should be frequently examined chemically and microscopically by a physician.

d. To sustain her own strength and to provide nutriment for the developing child the pregnant woman requires more and better food than at other times. In the early part the appetite may be capricious and the stomach irritable, but later on as a rule both appetite and digestion become better and the general condition greatly improved.

e. Notwithstanding the nausea and vomiting there is usually a gain of about ten pounds in weight during pregnancy.

f. The darkening of the areolae of the breasts during pregnancy has been described on page 58. Similar pigmentations, usually most marked in dark-haired women, are found in many other parts of the body—the face, abdomen, armpits, navel. Dark rings under the eyes are common and the face is often marked with patches or blotches of pigment of all sizes and shapes; these are popularly known as moth patches or liver spots and technically as chloasma. Occasionally the greater part of the face becomes discolored—the so-called mask of pregnancy. The discolorations of the skin usually fade after confinement, but do not always entirely disappear.

g. The whole nervous system of the pregnant woman is in a state of tension and the nerves are more sensitive and excitable. No two women feel the same whilst carrying a child, and we meet with every grade from the deepest depression to the highest exhilaration. Some women say that they feel better, healthier and happier during pregnancy than at any other time. In others, however, the whole character is changed, so that a woman of a bright, kind and lovable disposition becomes irritable, fretful, peevish, jealous and even despondent. Neuralgia, especially of the face and teeth, fainting spells, dizziness and hysterical outbreaks are quite common, but should not cause unnecessary worry, as they usually are purely functional in character and disappear quickly after confinement.

FALSE OR SPURIOUS PREGNANCY

This is a peculiar condition that occasionally occurs in nervous, hysterical women about the time of the change of life, and in single women who have been exposed to possible conception. Such cases at times are very deceiving, because many of the ordinary symptoms of pregnancy may be present. Menstruation may cease, the abdomen enlarge, sensations like fœtal movements be felt, the breasts enlarge and milk form in them, vomiting and morning sickness may occur. In addition to that, such a woman at the end of what she has believed to be pregnancy may have all the symptoms of labor itself—but no child. To remove all doubt and satisfactorily clear up such a case the physician must carefully study and consider the objective symptoms and not rely upon statements made by the woman herself or by others.

HOW TO FORETELL THE DATE OF CONFINEMENT

Every pregnant woman is naturally anxious to learn just when to expect her baby. To aid her in making such calculation several methods have been devised by means of which she can with a fair degree of accuracy foretell the date of her coming confinement. We will describe three methods:

1. Put down the date of the first day of the last menstruation. From this date count nine months forward or, what is the same thing, three months backward, and add seven days to the date thus obtained. For example, suppose the last menstrual period came on January 5th. By counting nine months ahead or three months back you get October 5th. Now add seven days and you have October 12th as the probable date of confinement.

2. Quickening usually occurs at four to four and a half months. If then you count forward four and a half or five months from the date on which quickening or life was first felt you have approximately determined the time of the coming confinement. Quickening does not appear at the same fixed time in all women, and on that account this method is not always satisfactory. It is of special use in calculating the date in those cases where conception has occurred in nursing women, because in them menstruation is normally suspended and cannot, therefore, be used as a basis for calculation.

3. The table given on page 63 is a simple and convenient method.

DURATION OF PREGNANCY

DIRECTIONS—Find in the upper horizontal line the date on which the last menstruation ceased: the figure beneath gives the date of expected confinement (280 days.)

Jan.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Oct.	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	Nov.
Feb.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28				
Nov.	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5				Dec.
Mar.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Dec.	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	Jan.
Apr.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
Jan.	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4		Feb.
May	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Feb.	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	1	2	3	4	5	6	7	Mar.
June	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
Mar.	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6		Apr.
July	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Apr.	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	May
Aug.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
May	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	June
Sept.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
June	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7		July
Oct.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
July	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	Aug.
Nov.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
Aug.	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6		Sept.
Dec.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Sept.	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	Oct.

CHAPTER VI

SIGNS AND SYMPTOMS OF PREGNANCY

There are so very few positive symptoms of pregnancy in the early months that it is sometimes quite difficult to decide whether a woman is or is not pregnant—in fact, a positive diagnosis of pregnancy before the second month is almost impossible.

The signs and symptoms of pregnancy are:

1. Cessation of menstruation.

In a woman previously regular, stoppage of the menses is the first symptom that leads her to suspect that she is pregnant. It is by no means a positive sign of pregnancy, because anaemia, taking cold, exhaustion, change of climate may account for the absence of the menses. Menstruation may recur for the first two or three months or regularly or irregularly during pregnancy. Many women become pregnant during lactation, though at such times menstruation is normally absent, and conception has occurred in young girls before the menses appeared and in women who had passed the change of life.

2. Irritability of the bladder.

The pressure of the growing womb upon the bladder often causes in the early weeks of pregnancy an almost constant desire to void urine. Many women consider this to be an early and sure sign of pregnancy. It is, however, by no means reliable, since it may result from many causes other than pregnancy.

3. Changes in the breasts and nipples.

These have been described on pp. 57-59.

4. Morning sickness, nausea and vomiting of pregnancy—salivation.

This is usually an early symptom of pregnancy, and whilst in most women it is a comparatively mild ailment, in others the vomiting may be so severe and persistent as to seriously affect the health. It often occurs immediately after conception has taken place, but as a rule it first appears about the fifth or sixth week and lasts until the time of quickening (fourth month). Occasionally it continues through the whole pregnant period and in some cases it disappears after the first few weeks, to reappear during the last few weeks.

It is usually first felt when the head is raised from the pillow or on getting out of bed in the morning, and varies from a slight nausea or the spitting up of a little frothy mucus to actual vomiting (possibly with retching) of sour, bitter fluids or food itself. Sometimes the nausea lasts throughout the day and is often made worse by eating or even seeing or smelling food and by sexual excesses. Nausea or vomiting is apt to be a marked symptom in the first pregnancy of nervous women.

Singular as it may seem, well-authenticated cases

have occurred in which the husband experienced the morning sickness instead of the wife.

In the severe cases of morning sickness there is apt to be an increased amount of saliva (cotton spitting), even to the extent of constant dribbling from the mouth.

Considered alone, morning sickness is just a suspicious symptom of pregnancy, but when added to other symptoms the probability of pregnancy existing is greatly increased.

5. Enlargement of the abdomen.

In the first two months of pregnancy the abdomen is flatter than usual, because the uterus, now heavier than usual, sinks or settles down in the pelvis. In the fourth month the uterus can be felt as a smooth, round swelling in the lower part of the abdomen. (See Figure 8.) At the sixth month the top of the enlarged uterus is on a level with the navel; in the seventh month it is two inches higher; in the ninth month it has reached the edge of the ribs.

The enlargement may, of course, be due to a tumor, but when it is possible to palpate the child or detect the fœtal movements it becomes a positive sign of pregnancy.

6. Softening of the neck of the womb.

This sign can often be detected by a skillful hand about the middle of the second month. An old rule but a good one says: "If the mouth of the womb feels as hard as the tip of the nose the woman is not pregnant, but if as soft as the lips she is pregnant." This is a valuable sign of pregnancy, especially when associated with other symptoms.

7. Quickening—Fœtal movements.

The term "quickening" arose from the erroneous belief that it was not until the child moved that it

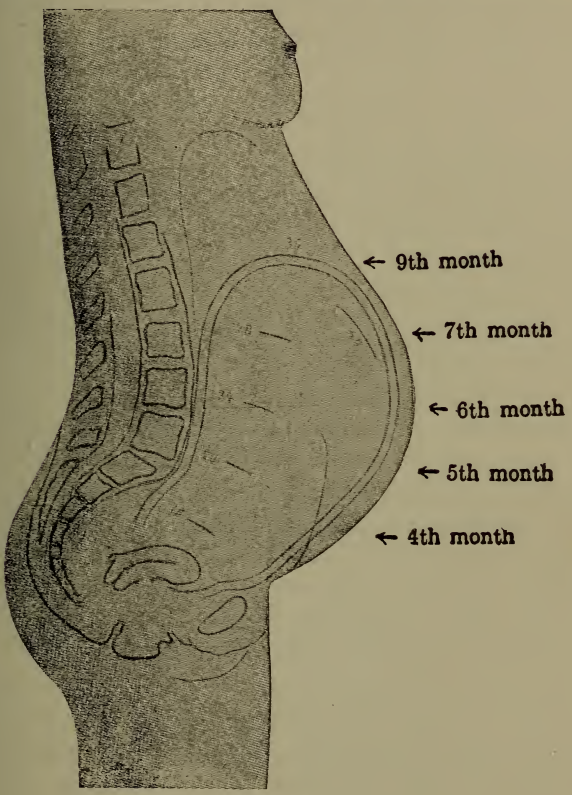


Figure 8

The size and height of the womb in successive months of pregnancy. The numbers indicate weeks.

became quick or alive. Foetal movements or quickening are usually first felt by the mother about the middle

of the fourth month, but the exact time varies greatly in different women. But even earlier than this some women have peculiar sensations described as fluttering, creeping or pulsating and called by them "feeling life." Faintness or other unpleasant nervous symptoms are very liable to occur when the movements are first felt, especially in a young, nervous woman in her first pregnancy. The force and frequency of the movements vary not only during pregnancy, but also in different women. At times they are so strong and violent as to cause actual suffering to the woman; in others they are absent or so weak and feeble that doubts may arise as to whether the child is living or dead. To the physician fœtal movements constitute a valuable and positive sign of pregnancy.

8. Fœtal heart sounds.

The beats or pulsations of the heart of the baby in the womb can be heard any time after the middle of the fifth month by the trained ear of the skillful physician through an instrument called the stethoscope. It is an absolute and positive sign of pregnancy, and because the heart beats slower in boys than in girls it is by many considered possible by this means to predict the sex of the child before birth.

Ballotement, Hegar's sign, Braxton Hick's contractions, uterine murmurs, are other positive and absolute signs of pregnancy, but are so scientific and technical that they are quite beyond the scope of our book and hence the mere mention of them must suffice.

Symptoms that indicate death of the fœtus:

When the child or fœtus dies while still in the womb the woman's health deteriorates, she suffers from chilly sensations and a heaviness or feeling of weight in the

abdomen; she no longer feels life or movements; the womb ceases to grow and the breasts become shrunken, soft and flabby. In addition to those symptoms the physician, even after repeated examinations, cannot hear the fœtal heart sounds or recognize any movement of the child.

Plural births—twins—triplets, etc.:

Twins occur once in about eighty-five cases, triplets once in about seventy-five hundred. A few quadruplets are born and there are recorded about a dozen cases of five at a birth. Certain women are more likely to bear twins than others; this tendency may be hereditary and at times is almost a family characteristic. The chances of twins are greatest in women who have previously born children, but also strong in the first pregnancy of women who marry late in life. In twin births a boy and a girl is the most frequent combination, next two girls, then two boys.

Twins and triplets are usually smaller and weaker than other children, and one may be larger than the others.

CHAPTER VII

HYGIENIC MANAGEMENT

The object of hygiene is to secure the most perfect health possible and prevent sickness. To this end it may be necessary to place certain restrictions upon our customary habits. We say restrictions, because many of the habits we may have developed by artificial modes of life are apt to be inconsistent with perfect physical development.

The special object in introducing the subject here is to secure for the mother the most perfect physical standard and, at the same time, endow her unborn child with a perfect constitution.

The pregnant woman should avail herself of every possible means to improve her physical health and avoid every influence that can possibly fret, annoy, distress or in any way injure her.

The husband and those who habitually must associate with her should endeavor to preserve the tranquility of her mind, remove all sources of anxiety, relieve all annoyances and by every possible means contribute to her vigor, cheerfulness and happiness. Her associations should be of the most cheerful, pleasant, graceful and happy character, so as to remove

from her mind gloomy forebodings, anxiety, fear and selfishness. She should never be surrounded with any imperfections, nor be annoyed with the contemplation of misery, deformity or unhappiness. She should never be compelled to hear stories of horror which Dame Grundy so much delights to tell.

Before important surgical operations are performed, more or less time is generally spent in putting the patient in the most perfect physical condition possible, that the system may be better able to bear the shock of the operation, a change that will result in diminishing pain and danger and hasten recovery. If physical perfection is a matter of so much consequence under such circumstances how much more important is it when the welfare of two beings is at stake?

If conception occurs while the woman is nursing another child it should be weaned at once, for her physical forces will rarely, if ever, enable her to maintain both without impairing their vitality and injuring herself.

EXERCISE

The pregnant woman should not lead a life of indolence, nor should she, on the other hand, indulge in prolonged or violent exercise. Much must depend upon the natural vigor she possesses.

Owing to the extreme liability of some women to miscarriage they will find it necessary to avoid motion almost entirely. This no doubt proceeds from some local weakness or irritability that is aggravated by motion. Fortunately, such cases are rare, and the best treatment is quiet, with passive motion. This condition frequently disappears after a certain period of gestation has been reached.

With this rare exception exercise is always beneficial if moderately indulged and is most beneficial when carried on in the open air, but should never, under any circumstances, be so active or long continued as to induce fatigue. Probably walking is the best form of exercise that can be taken, although when the pregnancy is far advanced it may become so difficult and painful that it may be omitted. When for any reason walking is not advisable, riding in an easy carriage may be substituted.

No matter whether she is to walk or ride, care should be taken that it is agreeable and pleasant. There should be some agreeable, animating object in view. The woman must not be made to realize that the walk or ride is a forced routine. The mind as well as the muscles must be diverted, else the exercise becomes monotonous and tiresome—a damage instead of a benefit. The same road or path should not be selected each day; the mind is to be occupied by new attractions; a variation of scenery and circumstances. The exercise should be frequently repeated and not too long continued and should be carried on in the open air in the sunshine.

By exercising in the forenoon we get the use of the best physical strength and at a time when every organ is in the best condition to profit by it. It is then that exercise is a pleasure. In the morning, exercise is apt to refresh. In the afternoon it is liable to fatigue. In the forenoon we are most apt to have sunshine and the air is purest and most exhilarating.

A gently active life is best calculated to preserve the health of the mother and her unborn child. The object is to increase and conserve the physical forces—to invigorate. Violent or prolonged exercise is to be

avoided. Running, dancing, rowing, lifting, carrying heavy weights, as well as riding in uncomfortable or uneasy carriages over rough roads or upon horseback are objectionable. Railway travel is unwise, the continuous jar of the cars being equally as dangerous as violent jolting.

The nearer delivery approaches, the more repose and quiet may be indulged. The use of the sewing machine should be discontinued.

THE LIVING ROOMS

Pure air and plenty of it is the rule, and not only should the exercise be taken out of doors as much as possible, but the air of the rooms she occupies should be free from impurities. The air should be frequently changed and is best done when the rooms are unoccupied. Give them frequent airings and avoid extremes of heat and cold. Perfect ventilation does not imply that the rooms are to be *turned out of doors* or the temperature reduced to the freezing point. A small opening at the top and bottom of the rooms will secure a constant change of air—a constant admission of oxygen and escape of carbonic acid gas—and yet the temperature may be maintained at an agreeable pitch. It is a mistaken notion that cold air only is pure.

The apartments do not want to be dark. Let in the rays of the sun; receive their vivifying influence. Plants will not thrive in the dark, and neither mother nor child can flourish without sunlight. Sun baths are decidedly beneficial. Sit in the sun half an hour or more daily. Feeble women will find it an agreeable tonic.

BATHING

Bathing is beneficial when properly employed, but

extremes must be avoided; there is no sense in *soaking* a person to death on the one hand nor completely obstructing the pores of the skin with dirt on the other. The temperature of the bath, the time of its employment and the object to be attained must always be considered.

It is folly to suppose the same kind of bathing will answer every purpose, for bathing implies something more than mere cleanliness; the temperature materially influences the result; and while one woman may be greatly benefited by a cold bath another will be injured by it. Those who have an abundance of vitality will find the cool or even cold bath beneficial and agreeable, while those of a feeble constitution may be so chilled and injured by it that, reaction failing to occur, serious internal congestions and even fatal consequences may follow.

As a rule, bathing should be agreeably tempered to suit, varying from cold to hot, partial or complete, plunge, tub, sponge, douche, sitz, etc.

Probably the temperate or tepid bath will be suitable for the greatest number. Immediately after emerging from it the body should be rubbed thoroughly dry with a coarse towel, that proper reaction be induced. Usually the bath may be continued from three to ten minutes, and the lower the temperature the shorter duration.

Cool baths are most beneficially employed in the fore part of the day, the object being mainly to secure its invigorating effect, while the warm bath on account of its soothing, calming influences is most beneficial in the latter part of the day or evening.

Women who have previously been in the habit of

cold, plunge or shower baths should not discontinue them now; but if they have never accustomed themselves to them it is doubtful if it is best to begin them while in this condition, lest the shock they occasion cause miscarriage.

The temperature of the different kinds of baths varies considerably, as will be seen from table:

Cold bath	30°	to 60°	Fahr.
Cool bath	60°	to 75°	"
Temperate bath	75°	to 85°	"
Tepid bath	85°	to 92°	"
Warm bath	92°	to 98°	"
Hot bath	98°	to 110°	"

Nervous women will find that a warm bath taken just before retiring will allay irritability, nervousness and induce agreeable sleep. It moderates pain and soothes the entire system; and if not continued too long will not debilitate, but rather invigorate. Bathing should not usually be indulged in while digestion is going on.

Baths may be medicated or not, as desired. For the purpose of cleanliness, the tepid sponge bath is most available, though the sponge employed briskly in the morning, moderately cool and followed immediately by a brisk rubbing is to be recommended; and those who have not the facilities for immersing the whole body will find it an excellent way to apply the tepid or warm bath at night.

THE SITZ BATH

With reference to the employment of the sitz bath we cannot do better than quote from the well-known author, Dr. Shew:

Pregnant women receive much benefit from a constant use of this bath. A small tub of sufficient size set upon a very low

stool or anything by which it can be raised a few inches is quite sufficient. Unpainted wood is the best material, metal being unpleasant and cold. The water is used from one to five or six inches deep. The length of time this bath is used varies from a few minutes to two hours or more. To avoid exposure to cold it is best to uncover only the part of the person to be exposed to water. This bath has the effect of strengthening the nerves, of drawing the blood and humors from the head, chest and abdomen, and of relieving pain and flatulency and is of the utmost value to those of sedentary habits. It is sometimes well to take a foot bath, tepid or cold, at the same time. If a large quantity of cold water were used in this bath it would remain cold too long, and thus drive the blood to the head and upper part of the body, which might be very injurious; but the small quantity of water used at once becomes warm and thus admits of speedy reaction. In some local diseases of the lower parts when there is inflammation and the cold water feels most agreeable the water is frequently changed. If there is any inclination to headache or too much heat in the head a cold bandage upon forehead and temples is good. It is often well to rub the abdomen briskly during this bath. The sitz bath may be used by any person whether in health or otherwise without the slightest fear of taking cold. Let those subject to giddiness, headache or congestion of blood in the upper regions try this and they will at once perceive its utility. In those troublesome itchings which often afflict pregnant women this application may be made as often as the symptoms occur and will be found a sovereign remedy.

It is not desirable that any shock should be given the system, and the temperature at which the bath is begun should usually be about that of the tepid bath. It can be employed at any time of day, and when taken in the evening is quite agreeable to those who do not use the warm general bath.

SLEEP

Plenty of refreshing sleep is essential to the welfare of both mother and child. At least eight hours is advisable. It favors the tranquility of both mind and body

and not only relieves the uneasiness and inconvenience sometimes attending this condition, but is a potent preventive of habitual miscarriage. A regular hour for retiring is advisable and the sleeping room should be quiet and airy, neither too warm nor too cold; the bed moderately hard; the covering light but sufficient to prevent chilliness; mattresses of hair or other firm material are to be preferred and feathers prohibited. Occasionally a nap during the day is admissible and frequent rests desirable; but in resting it is not best to sit on cushions, for, by the warmth of the body they occasion, they induce congestion of the pelvis, a condition particularly to be prevented.

THE CLOTHING

The dress should be loose and comfortable and so arranged that unequal pressure is avoided. It should be suspended from the shoulders instead of the waist and hips. Stays and corsets if worn at all must be loose enough to admit of perfect freedom of the abdominal muscles, and after the fifth month had better be laid aside. It would be better for all women if they would never wear corsets, for they impair the power of the muscles they surround.

Any attempt to conceal her condition by lacing, stays or tight dresses cannot be too severely condemned and will be certain to be followed by bad results which, in many instances, will not admit of a remedy. The Spartan law directed that pregnant women should wear large dresses, so as not to prejudice the free development of the precious charges of which nature had rendered them the momentary depositories.

In those women in whom the abdomen is unusually bulging or pendulous much relief is obtained

from wearing a properly fitting abdominal bandage.

Care should be taken that the breasts are not pressed upon nor injured in any way.

Flannel underclothing is always best, unless in the few

Figure 9

Position of the child and the womb in case of enlarged and pendulous abdomen.

exceptional cases where the skin is exceedingly sensitive.

In no case should tight garters if indeed any be worn, on account of their tendency to obstruct the circulation and cause cold feet and the knotted condition of veins that give so much trouble subsequently.

SEXUAL RELATIONS

In many pregnant women considerable pain in the lower abdomen and even abortion result from sexual intercourse; when too freely indulged in it exhausts the mother and impairs the vitality of the child. The greatest moderation should therefore be observed. The mind should be kept free from the subject and every circumstance that has a tendency to promote desire should be studiously avoided. In the early months (first two or three) when so many abortions occur and in women who easily abort or in whom symptoms of threatening miscarriage are present, and also in the later weeks of pregnancy, separate beds and even separate sleeping rooms are to be recommended. On the other hand, ungratified desires, where so great as to gain control of the mind, are liable to mark the fœtus with an insatiable appetite. It is for this reason we counsel moderation and believe the moderate gratification of any appetite when consistent with reason is better than absolute denial. Temperance is the best conservator of health and pleasure.

MATERNAL IMPRESSIONS—MOTHERS' MARKS

Although there is a great diversity of opinion about how mothers' marks are produced, yet the very fact that they *do* exist is evidence that there must be some cause. We will, no doubt, always be confronted with instances in which these marks cannot be traced to any assignable cause and, on the other hand, "assignable causes" will have proved inoperative.

Some writers have urged that there is no nervous communication between the mother and child. While we will not debate this point we are certain there is a direct communication through the blood, which is sufficient, were we to leave "sympathy" entirely out of the question, and if *one* quality may be transmitted through this medium *why may not others?*

No one will attempt to deny that during pregnancy the mother is unusually susceptible to external impressions; and in view of the accumulated evidence we regard it safe to state that any external circumstance that is capable of making a profound or prolonged impression on the mother may, through the blood or sympathy, affect the child *in utero.*

We might bring forward numerous instances to substantiate our views, but we regard them as entirely unnecessary. Every neighborhood has its examples. The prospective being is really a part of the mother herself and will be subject to a very great extent at least to the same influences.

The impressions or marks on the child vary from the smallest naevi (mothers' marks) to the greatest physical or mental deformity. The whole subject, however, is still in the world of speculation and theory, and we must therefore content ourselves with the facts given in the preceding paragraphs.

A practical conclusion suggested by this consideration is to remove the prospective mother as far as possible from the operation of those influences that may make unfavorable impressions upon the fragile structure of the unborn, and surround her with such influences as create a healthful, cheerful and agreeable state of mind. This should be remembered by husband,

attendants, associates and all who are brought in contact with her. The mind should be agreeably occupied—refinement, pure emotions, noble sentiments, equanimity should be cultivated, together with everything that contributes to good nature, enjoyment and serenity.

Avoid the presence of unsightly and disagreeable objects and as quickly and quietly as possible divert the mind from them. Gratify unnatural "longings" as far as is consistent with reason and circumstances and thus terminate their influence. Do not worry yourself about something you can not help, nor anticipate trouble that may never come to pass. Cultivate control over the will. Dismiss unpleasant thoughts and unreasonable fancies as quickly as possible; think of something else; do not listen to the horrible and terrifying stories which neighboring gossips delight to tell, nor be kept in a state of terror and anxiety about the termination of the conception by the yarns of those meddlesome old grannies who are always acquainted with some case that was just like yours and something happened.

Every community is unfortunately cursed by such busybodies. Heed them not; they are no more capable of judging of your condition or predicting the future than they are to be President, and their tales are nearly always imaginary.

Contemplate grace and beauty, and by such a course you will not only be likely to avoid mothers' marks, but to beget healthful, talented, beautiful children. Cultivation of mental qualities is worthy an effort. If it is desired that the unborn excel in some branch of learning or profession let the mother exercise her mind

in that direction. In a word, keep the mind free from unpleasant subjects, unhappiness, anxiety, anger, etc., but filled with agreeable fancies and charming images. Cultivate graceful attitudes, remembering that her course now must be reflected in the future character of her unborn babe. The ancient Greeks surrounded pregnant women with statuary, paintings and engravings, and with good results.

DETERMINATION OF SEX—CAUSE OF SEX OF CHILD

Is there any way by which one sex can be produced in preference to the other? In other words, can a boy or girl be produced as the parents may wish? From the oldest times scientists have tried to discover means to accomplish such a result. Many ways have been suggested, but none have stood the test. All are but mere theories that further experience has shown to be wrong or even absurd. One theory held that conception occurring just before the menstrual period produced a boy, but after the period a girl. Schenk claimed that sex depends upon the nutrition of the mother and the state of her blood—that in a woman abundantly nourished during the first four months and in whom the blood is made rich and red the chances are strongly in favor of a girl baby, and vice versa.

Science has not yet solved the problem as to what causes the sex, and the question must therefore for the present remain as one of nature's hidden secrets.

CHAPTER VIII

DIETETIC MEASURES

Since the composition of different kinds of food has been determined by chemical analysis the influence of diet upon physical conditions is capable of comprehension, and there no longer remains any doubt of the importance of a well-selected diet in pregnancy. It has been proved that at least some of the unpleasant phenomena attending this condition can be overcome or avoided by a properly regulated diet.

We have already had occasion to allude to the influence bony development of the fœtus exerts upon the ease or difficulty of childbirth, and it is now appropriate that we consider the relation of diet to bony or osseous development. It is well known to physiologists that the various structures of the body are elaborated from the materials supplied by the food, and that if certain nutritive elements are deficient those structures into the composition of which they enter must necessarily be defective.

Bones are composed very largely of calcareous or earthy matters, and the process of ossification is not completed in all the bones until the individual has reached adult life.

In the early stages of fœtal life, what afterwards becomes bone is in a state closely resembling gristle, and it is not until several months have elapsed that the deposit of earthy matters takes place in this gristly substance, but so rapidly does it then take place that at birth some of the bones have acquired considerable hardness and thus preserve the form and shape of the child. This bony development, therefore, we desire to retard in order to render the birth easy; and as the earthy substances that form bone as well as the materials that compose the other structures of the child must necessarily be derived from the blood of the mother, and her blood in its turn be supplied by her food, the question naturally presents itself: Why cannot the food of the mother be selected so that there shall be a sufficiency of all the nutrient materials except that which occasions the hardening of bones?

So far as we know, this subject was first brought to public notice by an English chemist named Rowbotham, by the publication of a small pamphlet in 1841. This pamphlet is now out of print, but the principles it contained have been made the central idea of a treatise entitled, *Parturition Without Pain*, by M. L. Holbrook, M. D., to which very valuable little work I am greatly indebted for many important suggestions.

Mr. Rowbotham's idea originated from reading the physiology of the development of the fœtus, from which he reasoned that the calcareous substances being deposited from the mother's blood, a diet deficient in this element would materially affect the character of the birth. His wife having suffered severely in two previous births he determined to try the experiment of a restricted diet with the hope of relieving her

suffering, and the result being so satisfactory he made it public in the pamphlet referred to above.

She had, on this occasion, two years and a half after the last delivery, advanced full seven months in pregnancy before she commenced the experiment at her husband's earnest instance. Her legs and feet were, as before, considerably swelled, the veins distended and knotty and her health diminishing.

She began the experiment in the first week of January, 1841. She commenced by eating an apple and an orange the first thing in the morning and again at night. This was continued for about four days, when she took just before breakfast in addition to the apple and orange the juice of a lemon mixed with sugar and at breakfast two or three roasted apples, taking a small quantity of her usual food, viz.: wheaten bread and butter. During the forenoon she took an orange or two and an apple. For dinner she took fish and flesh in small quantities and potatoes, greens and apples—the apples sometimes peeled and cut into pieces, sometimes boiled whole, along with potatoes, sometimes roasted before the fire and afterwards mixed with sugar. In the afternoon she sucked an orange or ate an apple or some grapes, and always took some lemon juice mixed with sugar or treacle. At first the fruits acted strongly on the stomach and intestines, but this soon ceased and she could take several lemons without inconvenience. For supper she had again roasted apples or a few oranges, and rice or sago boiled in milk; sometimes the apples peeled and cored were boiled along with the rice and sago. On several occasions she took for supper apples and raisins or figs, with an orange cut among them, and all stewed together. Two or three times a week she took a teaspoonful of a mixture made of the juice of two oranges, one lemon, half a pound of grapes and a quarter of a pound of sugar or treacle. The sugar or treacle served mainly to cover the taste of the acids, but all saccharine matters are very nutritious. The object of giving these was to dissolve as much as possible the earthy or bony matter she had taken with her food during the first seven months of her pregnancy.

She continued in this course for six weeks when, to her surprise and satisfaction, the swelled and prominent state of her veins which had existed before she began had entirely subsided; her

legs and feet which were also swelled considerably had returned to their former state and she became so light and active she could run up and down a flight of more than twenty stairs with more ease than usual when she was perfectly well. Her health became unwontedly excellent and scarcely an ache or a pain affected her up to the night of her delivery. Even her breasts which, at the time she commenced the experiment as well as during her former pregnancies were sore and tender, became entirely free from pain and remained in the very best condition after her delivery and during her nursing.

At nine o'clock on the evening of March 3d after having cleaned her apartments she was in the adjoining yard shaking her own carpets, which she did with as much ease as anyone else could have done. At half-past ten she said she believed her time had come and the accoucher was sent for. At one o'clock the surgeon had left the room. He knew nothing of the experiment being made, but on being asked on paper by the husband two days afterward if he "could pronounce it as easy and safe a delivery as he generally met with," replied on paper: "I hereby testify that I attended Mrs. Rowbotham on the third instant and that she had a safe labor and more easy than I generally meet with." On his asking the female midwife if she thought it as easy as usual, replied: "Why, I should say that a more easy labor I never witnessed; I never saw such a thing and I have seen a great many labors in my time."

"The child—a boy—was finely proportioned and exceedingly soft, *his bones were all in gristle*, but he became of large size and very graceful, athletic and strong as he grew up. The diet of his mother was changed on his birth and she ate bread and milk and all articles of food in which phosphate of lime is found and which had been left out before. She also got up from her confinement immediately and well. After her last delivery, in July, 1838, full ten days elapsed before she could leave her bed and then she swooned at the first attempt. On this occasion, March, 1841, she left her bed on the fourth day and not only washed but partly dressed herself. Had she not been influenced by custom and somewhat timid she might have done so sooner. To be assisted appeared like a burlesque to her, not to say annoyance. She had no assistance from medicine. In the former pregnancy

she had subsisted very much on bread, puddings, pies and all kinds of pastry, having an idea that solid food of this kind was necessary to support and nourish the fœtus, and it is quite right to suppose that nutritrious food is necessary for this purpose, but nutritious food can be had without that hard and bony matter which is so large an ingredient in wheaten flour. For instance, the West India grains, sago, tapioca, rice, etc., have little of it; and Mr. Rowbotham made a table of substances with the proportion of phosphate of lime in each so that it may be avoided in the food during pregnancy and used afterwards in nursing when the bones and teeth are made. Wheat contains most earthly matter.

"Beans, rye, oats, barley, *have not so much earthly* matter as wheat; potatoes and peas not more than *half as much;* flesh of fowls and young animals, *one-tenth;* rice, sago, fish, eggs, etc., *still less;* cheese, *one-twentieth;* cabbage, savoy, brocoli, artichokes, coleworts, asparagus, endives, rhubarb, cauliflower, celery and fresh vegetables generally, turnips, carrots, onions, radishes, garlics, parsley, spinach, small salad, cucumbers, leeks, beets, parsnips, mangel-wurzels, mushrooms and all kinds of herbs and flowers average less than *one-fifth;* apples, pears, plums, cherries, strawberries, gooseberries, raspberries, cranberries, blackberries, huckleberries, currants, melons, olives, peaches, apricots, pineapples, nectarines, pomegranates, dates, prunes, raisins, figs, lemons, limes, oranges and grapes, on an average, are *two hundred times less* ossifying than bread or anything else prepared of wheaten flour."

With such an extensive list of non-ossifying edibles to select a dietary from, and the culinary ingenuity of most women, it does not seem that the appetite for preparations of wheat would be very difficult to appease. A varied diet is absolutely essential to health, and an occasional meal of which wheat bread forms a part may be permitted, more particularly in the early months of gestation, but in the three latter months when ossification is going on, the more carefully the diet is selected to exclude phosphate of lime the better.

There is no danger of injury to the mother or child by this dietetic course, for it is impossible to exclude *all* calcareous matter, yet the quantity can be so diminished as to *retard* instead of *favor* ossification. The list as quoted above may not be absolutely correct, yet as the fruits that are most advised contain so much acid that they probably hold the calcareous matters in solution and prevent their deposition, consequently the list is practical and the results satisfactory.

As regards drinks, in many sections the water contains in solution considerable quantities of lime—the water is hard—consequently rain or snow waters are best. Boiling such hard water before using will cause the precipitation of considerable of the lime, as may be observed by the formation of the crusts in the tea-kettle. When it is necessary to use hard water it should be boiled and cooled before using for cooking or drinking. Tea and coffee may be moderately indulged in, and of the two tea is least objectionable. Cocoa contains less lime than coffee, though coffee is a good nutriment with this one exception. Lemonade or drinks made of acid fruits, jellies, etc., are unobjectionable, and the acids they contain will to a certain extent hold the earthy or calcareous bony matters in solution and oppose their deposition.

Women living upon the foregoing diet will have little desire for much drink of any kind.

Swelling of the feet and limbs rarely occurs when the fruit diet is employed, and cases suffering from such difficulty when the diet is begun will generally experience decided relief.

There has been no objection offered to animal food. Indeed, we would advise that it form at least a small

portion of the diet, particularly in debilitated and feeble women, but in those of full habit it had better be sparingly eaten, as it is heating while the acid foods are cooling. Lamb, veal, chicken and fish are the most appropriate meats for this condition.

Inordinate and capricious appetites for improper and noxious articles should, of course, be opposed, but when the longing can safely and properly be indulged it should be gratified. With the diet list advised very little if any annoyance is to be apprehended.

The benefits to be secured by a well-regulated diet are not merely hypothetical, but have been fully substantiated by experiment. Soon after the publication of the pamphlet referred to, an English lady of high respectability resolved to profit by the idea and as soon as she thought she was pregnant she abandoned bread, potatoes and milk and subsisted on the West Indian grains, rice, tapioca and sago, fruits of all kinds and vegetables and when she ate meat she ate that which was young, drank lemonade and tea, both of which were made of distilled water. She did not suffer an hour's inconvenience during the whole time, the birth was easy and the child though very soft at first grew rapidly and became large and strong.

Numerous others have tried it that we know of and have been reported by others, and not a few have come under our own observation, in all of which the results are mainly the same. Several have tried the plan at my suggestion and the results have in every instance been highly satisfactory.

Those nations among which childbirth is comparatively easy, subsist mainly on a diet in which bony materials are very limited. Females of tropical

climates where the diet is very largely fruit suffer very little at childbirth. The American Indians eat very little wheat and the same is true of the colored slaves of the South.

It is a very popular but erroneous idea that the mother must gorge herself throughout pregnancy in order to support and nourish the unborn—that she must "eat for two." This is a very great mistake. On the contrary, instead of eating more than she wants she should be governed by the dictates of hunger and never eat an extra mouthful. The amount of nourishment the fœtus requires day by day is very trifling indeed. As a result of such a mistaken notion she disorders the stomach, becomes heated and feverish, is troubled with headache and dizziness and lays herself liable to numerous intestinal disorders; and if assimilation is active in proportion to the increased amount eaten she becomes extremely fleshy and uncomfortable and will be liable to much annoyance from swelling, cramping or numbness of the extremities.

Figure the matter out for yourselves: The average duration of pregnancy is two hundred and eighty days; the average weight of the child and placenta (*afterbirth*) does not exceed ten pounds and generally not over eight; then ten pounds give one hundred and sixty ounces, or but little more than half an ounce a day is required.

Admitted that during the first four months the amount required will be much less than in the last four, as we more nearly approach delivery the greater will the amount required become; nevertheless, the average remains the same. Laying the question of average aside there is no use of the mother commencing

to lay in a surplus for at least the first six months, though during the last three the amount of nourishment might be slightly increased. She should also bear in mind that if by excessive eating she increases the nutrition of her child she increases its growth, and for every ounce she increases its development beyond a given point she unwisely diminishes the ease of delivery.

Numerous authorities might be cited on the subject, but we do not regard them necessary; the proposition is too easy of comprehension to require argument and unless morbid conditions supervene to require a modification of the amount eaten for therapeutic purposes the dictates of hunger will be by far the best guide how much will be best, always bearing in mind, let moderation in all things prevail.

CHAPTER IX

REMEDIAL TREATMENT

ALTHOUGH the measures already advised are of the utmost importance and will certainly exert a powerful influence over the ease and safety of delivery, the mother's recovery and the future welfare of the child, there remains to be considered other agencies in the efficacy of which we have almost unlimited confidence—agencies which exercise a positive curative influence over those abnormal conditions that so frequently attend or co-exist with pregnancy and which so often complicate and increase its difficulties.

These agencies—therapeutic in character—may be employed in conjunction with the hygienic and dietetic measures already detailed, and will act in perfect harmony with them and mutually increase the value of each other.

We have seen the dietetic and hygienic measures employed alone with the most decided benefit; and have in other cases tried the therapeutic treatment we are about to advise—when the other could not be made available—with the effect of rendering the labor short, easy and safe, as well as controlling any unpleasant symptoms that presented during the progress of the pregnancy.

All women are not affected in the same manner—all constitutions are not alike—and we will often observe pathological conditions occurring during pregnancy which had their origin long before the conception took place; or pathological conditions may be developed during gestation. There may be abnormal conditions which do not depend for their present existence nor are in way connected with pregnancy, yet, if allowed to proceed will seriously militate against a short, easy or safe delivery. Again, these morbid conditions may have an intimate connection with the gestatory or pregnant state. The present and future welfare of both mother and child necessarily depends greatly upon our ability to control or remove these conditions.

At the risk of seeming inconsistent or of appearing to lack confidence in what I have already written and advised in the preceding chapters I shall consider those remedial agents which have in my hands and in the hands of my professional acquaintances accomplished so much for the relief of suffering women.

There is a tradition that the Indian women of this country for two or three months prior to delivery resort to drinking an infusion of a plant known as *squaw vine or partridge berry* in order to render their delivery easy and safe. Whether this tradition has any foundation in fact or not, I do not know, nor does it seem that I need care, so long as the tradition has developed a knowledge of a remedy of the greatest possible consequence to the parturient female. Whether the squaws drink it or not, there is nothing more certain to my mind than that it does possess the truly wonderful and beneficent properties ascribed to it.

In the *American Dispensatory*, by Dr. John King, we find the following reference to it:

It is said that the squaws drink a decoction of the plant for several weeks previous to their confinement for the purpose of rendering parturition safe and easy. * * * * * * * * * Partridge berry is parturient, diuretic and astringent, used in dropsy, suppression of urine and diarrhoea. It seems to have a special affinity for the uterus and is highly beneficial in all uterine diseases. It appears to exert a powerful tonic and alterative influence on the uterus. Dose of the strong decoction, from two to four fluid ounces two or three times a day. The berries are a popular remedy for diarrhoea and dysuria. It is highly recommended as a remedy for sore nipples, used as follows: Take two ounces of the herb, fresh, if possible, and make a strong decoction with a pint of water; then strain and add as much good cream as there is liquid of the decoction; boil the whole to the consistency of a soft salve and, when cool, anoint the nipples with it every time the child is removed from the breast.

Hale, in his *New Remedies*, says:

I would recommend it for *false pains, uterine irritability, scanty and delaying menses, dysuria and scanty urine with profuse sediment.*

In procuring this remedy it is best to obtain it by its botanical name, *Mitchella Repens*, as there are several plants known in different parts of the country by the name of squaw vine, squaw berry, squaw mint, partridge berry and other similar names which would have a tendency to confuse anyone not familiar with botany, and it is necessary to get the right plant.

An infusion is always the best form for administration and will be found most efficacious, for I must confess, though I have tried several specimens of fluid extracts, they have failed to afford the satisfaction I have derived from the infusion of the recently gathered plant. It is advisable not to rely on the plant that has

been gathered more than a year, as it is apt to lose its strength and become inert if kept longer.

The action of this remedy either alone or in combination is to act gently upon the kidneys and urinary organs, relieving irritability and moderately increasing the flow of urine. It cleanses the blood, soothes any nervous excitement that may exist, removes pain and soreness and effectually overcomes any morbid inflammatory conditions of the female reproductive organs, strengthens the uterus and establishes such a healthy condition as results in an easy and safe delivery.

When the lower extremities are swollen as is often the case after the pregnancy is well advanced, owing to an obstruction of the circulation, I have seen this remedy produce the most decided and speedy relief. I have given it in the treatment of various uterine disorders with the most satisfactory results, but the consideration of those complaints having been made in this edition the subject of a separate chapter, further allusion to such use of it at this time is unnecessary.

There is another plant that possesses a similar and deserved reputation, and I have frequently combined them with the happiest results. I allude to blue cohosh, the botanical name of which is *Caupolhyllum Thalictroides*, also known as squaw root, of which Dr. Hale in his recent popular work on *New Remedies* says:

The aborigines and early settlers claimed for it the power of preventing *tedious and painful labors*. This testimony has been substantiated by many prominent and trustworthy physicians of the eclectic school as well as of the homoepathic. A few of our school have denied it such power, but the weight of evidence is against them. Dr. A. E. Small is sure from the observations of many years that it actually prevents the usual sufferings which many women undergo. He also testifies to the singular

fact that many women who have taken it for such purposes have overrun their time to the extent in some cases of ten or twelve days. The cases referred to, however, all had very easy labors and a good recovery.

My experience has been so uniform and conclusive on this point that I do not hesitate to assert that it prevents not only a too painful labor, but it prevents those premature labors which are so common among the weakly women of this age.

I have repeatedly used a combination of the two with the most satisfactory results. I obtained the fresh materials and administered them in the form of a sweetened infusion, sometimes adding other agents that seemed specially demanded. In very many instances have I made use of these remedies in cases which had hitherto undergone the most terrible sufferings at parturition, with the effect of enabling the mother to have a very speedy delivery, almost absolutely free from pain. In those females who had taken it there was very little of the inconvenience usually experienced in the latter months of gestation; the mothers made a wonderfully speedy recovery and in some instances were entirely relieved of uterine disorders to which they had for several years previously been subject.

While practicing medicine in the central part of the State of New York so favorable were the results attained by using the foregoing remedies in the form of sweetened infusions which I then prepared, the remedy acquired such a reputation that very many parturient women procured it that they might go through childbirth without pain; and though it was taken in hundreds of cases where I could not attend the confinement I have never known of a single instance of failure; but, on the contrary, received many testimonials of

its efficacy and thanks for the benefits derived from it. There are many women who will remember taking what I then termed the "mother's cordial," the composition of which I did not reveal to them, but which consisted mainly of an infusion of the squaw vine and blue cohosh preserved with sufficient sugar and alcohol to render it palatable and secure its preservation while being used.

In using an infusion of these plants an ounce of the *squaw vine* and half an ounce of *blue cohosh* should be steeped in a pint of water and the whole taken in the course of three or four days. When one is used alone a greater quantity should be employed than when both are used together.

A very convenient and agreeable combination may be made thus:

Squaw Vine, ...	½ pound
Blue Cohosh, ...	¼ pound

Bruise them thoroughly and add one gallon of water and let them stand over night. Then heat them nearly to the boiling point and gradually reduce the quantity of liquid (occasionally letting it come to a boil) to one half, strain and press out all the liquid, which should measure three pints, add 1 pound of loaf sugar and dissolve; then add spirits to make the whole measure two quarts. The dose should be a tablespoonful three to five times a day. The spirits are only added to preserve the preparation and need not be added when the infusion is made in small quantities to be used before it would sour. In cold weather a less quantity of spirits will suffice. Whisky, gin or alcohol may be used.

There is still another plant that is indigenous to this country which enjoys a growing reputation, not only for the relief of those morbid conditions that render gestation and delivery painful and tedious, but as a remedy

to expedite delivery. I refer to the *black cohosh* or *Cimicifuga Racemosa* also known as *macrotys*. Given in small doses for two or three weeks there can be little doubt that it has the power of rendering the labor very short and easy.

Dr. Scudder of Cincinnati, editor of the *Eclectic Medical Journal*, speaks positively on the subject as follows:

Pregnancy is a physiological condition and there should be little or no pain, ache or unpleasantness associated with it. If there is it should be looked after at once and removed. These unpleasantnesses can and should be relieved for the comfort of the mother and more especially because this will probably render the labor easier and the getting up better. Let me again call attention to *macrotys* as *partus preparator*, though doubtless most of our readers have tested it. If there are pains and aches in the region of the uterus, tenderness on pressure or soreness at any part of the uterine globe; if the movements of the child are painful or there is pain in the pelvic articulations or, finally, if during the last month there are false pains, *macrotys* is likely to be a remedy. I have used it time and again in these cases with relief and in others during the last six or eight weeks of gestation simply to facilitate and make the labor easier, and I am satisfied with good results.

In Hale's *New Remedies* the author makes the following allusion to it:

Dystocia (difficult labor) is one of those abnormal conditions which come under the domain of homeopathic medication. It is useless to cling to the antiquated superstition that a woman must suffer the "pangs of childbirth." Dystocia is always the result of an abnormal condition of the tissues concerned in the functions of childbearing. * * * * * * * * * * * *
I have attended many women whose previous labors had been exceedingly painful—almost unendurable without ether—but, owing to the administration of *cimicifuga* during the last weeks of pregnancy they suffered very little. So many of these cases have occurred in my practice and in that of my colleagues that

it is not proper to affect skepticism or unbelief. As a rule, first labors are painful and protracted, while subsequent ones are less so; but if five or six are very painful and each one seems to be more painful than the last we cannot expect the seventh to be painless except from some remedial interference. Now, if in such cases *cimicifuga, caulophyllum* or *viburnum* is given and the woman's next labor is easy, what are we to think? Evidently, that the medicine effected a change of condition from abnormal to normal.

In such cases give the *cimicifuga* at least two weeks previous to the expected date of labor, in doses of one to ten drops two or three times a day, the doses repeated oftener as the date approaches.

The preparation alluded to by Prof. Hale is the homeopathic mother tincture and when it can be obtained will represent very certainly the virtues of the drug. An infusion of the root, one half ounce in a pint of boiling water of which the dose may vary from a teaspoonful to a tablespoonful repeated three or four times a day, will also answer. The fluid extract, when reliable, in doses of from three to eight drops may be used. When the homeopathic tincture cannot be readily obtained the following procedure will answer:

Black Cohosh Root, . . .	¼ pound
Alcohol, ...	½ pint

Bruise the cohosh as fine as possible and put it in the alcohol, cork and let it stand a week or two, occasionally shaking the same. At the end of this time it may be strained and used in doses as advised for homeopathic tincture.

Dr. J. H. Dye's Mitchella Compound contains both cohosh and squaw vine as well as other ingredients. It should be taken daily for as many months of pregnancy as possible. Thousands of testimonials bear witness to the wonderful healing and pain-relieving powers of Mitchella Compound.

CONSTIPATION

Every effort should be made to keep the bowels open and regular. A daily evacuation of the bowels is essential to health, and to neglect for several days together the performance of so important a function is highly prejudicial, for if long continued it sooner or later develops a variety of ailments often of a serious character, among which we may notice feverishness, loss of appetite, indigestion, wakefulness, headache, horrible dreams, sickness of the stomach, bearing down pains, piles, etc.

This troublesome complaint is more easily prevented than cured, though a cure can almost always be effected. Habit has very much to do with its development and cure. The habit of evacuation should be encouraged daily, and the best time is in the morning, soon after breakfast; the bowels having then been quiet during the night are stimulated to activity by partaking of food and consequently have a natural tendency to act at this time, and whether the desire is felt or not the attempt should be made, which may be aided by an injection of tepid water. The influence of the diet and exercise which have already been recommended is exceedingly beneficial in preventing and curing costiveness. A glass of water drank at night and another the first thing on rising, and an orange eaten before breakfast will work wonders. If the woman is of full habit and costive I would advise a small quantity of Epsom salts daily, just enough at a dose to produce a free, natural evacuation. They cool the system, relieve determination of blood to the head, with dizziness, swelling of the feet, etc., prevent nausea and a host of the disorders that attend constipation. We are

well aware the taste of salts renders them objectionable to very many. When such is the case they may be disguised and their value enhanced by dissolving them in hard cider in the proportion of half a pound of the salts to a gallon of old cider of which the dose will be two to four ounces once or twice a day. The object being to maintain a natural condition, the dose must necessarily be varied accordingly.

Other saline laxatives may be used in their stead, such as Rochelle salts, seidlitz powders, citrate of magnesia, Carlsbad salts, sodium phosphate or mineral water, etc., in quantities sufficient to regulate the bowels.

It so happens that women who are not plethoric are often troubled with constipation; indeed, constipation in them is a very common condition and is often a source of very great trouble. Such women should eat abundance of cereals, fruits and vegetables—oranges, apples, prunes, figs, tomatoes, spinach, beans, peas, etc. A soap and water enema, a glycerine suppository or the injection into the bowel of four to six ounces of olive oil may be used occasionally for temporary relief, but strong, violent purgatives should be scrupulously avoided. Mild tonic laxatives, however, may be needed, and of these the best are Cascara Sagrada, Phenophthalein and Compound Licorice Powder. From five to thirty drops of the fluid extract of Cascara Sagrada or one or two teaspoonfuls of the cordial taken in a little water morning and night will usually be followed by happy results. If preferred a two or three-grain Cascara tablet may be taken at bedtime.

Phenophthalein is best taken in the form of a one-grain tablet two or three times a day after meals. Many

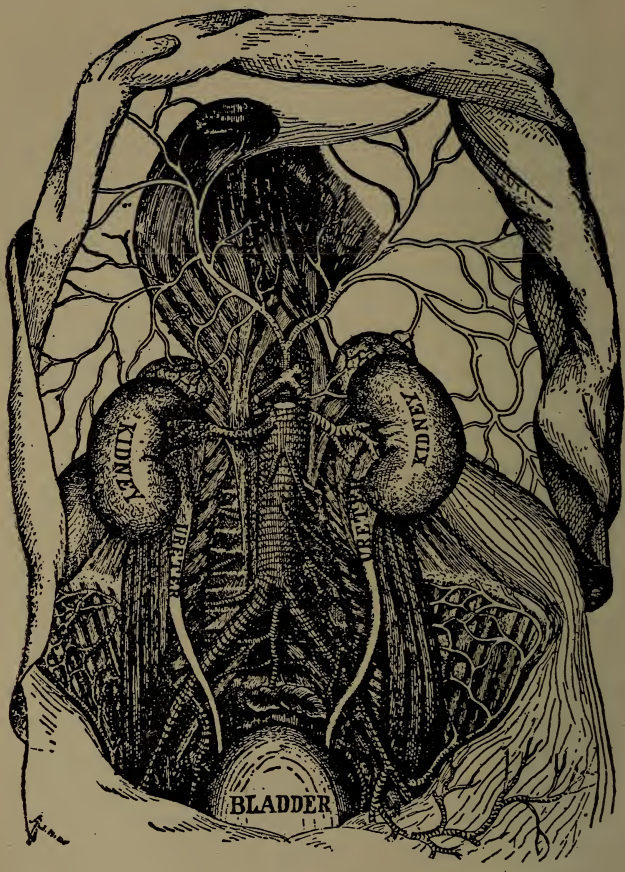


Figure 10

women find a teaspoonful of Compound Licorice Powder in half a glass of milk at bedtime a very mild and satisfactory laxative.

THE KIDNEYS

The condition of the kidneys must always be remembered and any irregularity corrected. When the

kidneys are not kept sufficiently active the general health suffers, and if this condition occurs about the time of delivery it renders convulsions liable. Inactivity of the kidneys is sometimes the cause of the swelling and dropsical condition of the lower extremities, though such a condition is usually due to pressure of the enlarged uterus upon the returning current of blood through the veins into general circulation.

The total amount of urine passed in twenty-four hours should be estimated from time to time, and a sample sent to the physician for examination. This is particularly advisable when such symptoms as puffiness of the eyes or swelling of the hands, feet or ankles appear. Convulsions at the time of confinement are very often the result of kidney disease. The diet we have recommended will usually keep both bowels and kidneys in a normal condition and Dr. Dye's Mitchella Compound being diuretic is generally all that will be needed; but, should the urine become scanty, the following may be relied upon and will restore the kidneys to a healthy condition:

Acetate of Potash, . . .	1 dram
Sweet Spirits of Nitre, . .	3 drams
Simple syrup to make, . .	2 ounces

Dose—one teaspoonful in water three to six times a day.

MORNING SICKNESS

Much good may be anticipated from the dietetic and hygienic advice already given, for among those who have tried it the absence of this annoyance was particularly noted. I am led to believe that the sickness and vomiting of pregnancy depend more upon those unnatural conditions developed by the impositions of modern social customs than upon any *natural* relation to reproduction.

The power of Dr. Dye's Mitchella Compound to control irritable conditions of the uterus renders it a very effectual remedy in the nausea and vomiting of pregnancy, though its action on the stomach directly is of no consequence. When the sickness and vomiting occur immediately on getting up they may be prevented by taking the breakfast while lying quietly in bed. Small pieces of ice slowly dissolved in the mouth and swallowed, often have an excellent effect, and so do cold compresses applied over the stomach or back of the neck.

Innumerable remedies have been recommended for the relief of morning sickness, but there is no known specific and it is often necessary to try one remedy after another, because that which will relieve or cure one may utterly fail in another.

The bowels should be kept open and if solid food seems to increase the nausea or vomiting, liquid foods such as milk, plain or mixed with soda water or lime water, or well strained broths should be given in small quantities at frequent intervals.

Relief sometimes comes from abstaining from all kinds of food for several hours or even for a whole day.

A cracker eaten dry before the head is raised from the pillow is a simple remedy well worth a trial. So are pop corn, ice cream, scraped beef, junket, spruce chewing gum and iced champagne.

A sour stomach and heartburn are often helped by equal parts of milk and lime water in tablespoonful doses every hour, Vichy water or bicarbonate of soda.

The mustard or capsicum plaster is worthy of a trial, as is also a plaster composed of various spices applied over the pit of the stomach.

The acid fruit diet generally controls the sickness and arrests or prevents the vomiting, and for this purpose lemon juice is often valuable. It may be taken in doses of a tablespoonful mixed with an equal part of water.

The effervescing solution of citrate of potassa or magnesia is sometimes very efficacious and acts as a laxative at the same time; and being an agreeable drink will often be tried before other means are resorted to. It will be in harmony with the principles of the fruit diet.

When headache and nervousness are prominent symptoms, bromide of potassium is an efficient remedy and may be given as follows:

Bromide of Potassium, . .	2 drams
Cinnamon Water, . . .	3 ounces

Dose—two teaspoonfuls in a wineglassful of water two or three times a day.

If previous instructions are obeyed, this prescription will very rarely be needed.

Should the stomach reject this it can be given as a rectal injection. Thirty to sixty grains dissolved in three ounces of liquid starch injected and retained in the bowel is the proper amount.

Many cases are relieved by taking 10 to 15 grains of subnitrate of bismuth three times a day or 5 grains of the oxalate of cerium before each meal, or one drop of the wine of ipecac in one half teaspoonful of water every hour, or 5 to 10 drops of the tincture of nux vomica in water three times a day.

When the stomach becomes so irritable that all kinds of food and medicine no matter how given are rejected, the general nutrition fails and weakness or

exhaustion supervenes. In such cases it is necessary to feed by the bowel—rectal feeding. This is done as follows: Wash out the rectum by irrigating it with plain warm water from a fountain syringe. Then introduce high up in the bowel through a rubber tube or catheter from 4 to 6 ounces of peptonized milk or broth or the whites of two or three eggs in water. To prevent its ejection the woman should remain quiet and a slight pressure made against the anus for a few minutes.

LONGINGS—CRAVINGS—DEPRAVED APPETITE

Depraved appetite is regarded by many as a significant sign of pregnancy. The woman may be seized with a desire for some unnatural substance, and will often eat chalk, magnesia, charcoal, slate-pencil, etc. She often wants some article of food which she may have previously disliked, and often such articles will be found acceptable. When it can be done without too great an inconvenience this morbid appetite or longing may be gratified, but when it cannot, the woman should dismiss it from her mind. We do not place as much stress upon the gratification of these unnatural appetites and desires as many, yet, as they afford a comfort to the mother we suggest that when reasonable and practicable they may be indulged. A healthy condition of every function will soon do away with them, and to this end we should seek to improve the woman's condition by every possible means, rather than attempt to relieve such desires by special means alone. The course already prescribed will generally soon overcome longings, and to give her some unexpected article of diet will often break the "longings." If a morbid condition exists in the stomach let it be met with

appropriate remedies. Diseases of the stomach not belonging to this treatise must be omitted.

LOSS OF APPETITE

If the appetite fails, let the woman abstain from eating for a meal or so; or if her strength fail on account of it let the appetite be "coaxed" by some unexpected delicacy, and small quantities of highly nutritious food be tried. Those who try our hygienic, dietetic and remedial plan will seldom be annoyed by loss of appetite or such morbid conditions; but should they fail, change of climate, scenery or surroundings will often work wonders when combined with the treatment recommended for morning sickness. Should they fail, it will be advisable to consult a physician.

FLATULENCY—GAS IN STOMACH AND BOWELS

Flatulence generally comes from a bad state of the digestion and is often associated with colic. In such cases it will be found better to eat a little and often than to eat at long intervals and much at a time. Certain articles of diet will induce an attack and when they are known should be avoided. Allowing a weak or irritable stomach to go long empty and then filling it to repletion will generally provoke an attack of colic if anything will.

Avoid indigestible articles of diet, chew the food thoroughly, and if remedies are needed a grain or two of cayenne pepper will often relieve, or ten to fifteen drops of tincture of capsicum and myrrh (No. 6) in sweetened water. They act by increasing the power of natural digestion. A little peppermint or camphor water or a soda mint tablet will generally expel the wind and give relief. An injection to move the bowels will succeed. Some of these plans are generally

available and can be had on short notice, but as a remedy nothing can excel the following:

Tincture of Colocynth, . .	15 drops
Water, ...	4 ounces

Dose—A teaspoonful repeated every fifteen to twenty minutes during the attack and, afterwards, to break up the tendency of the trouble to return, a teaspoonful three or four times a day for several days.

VARICOSE VEINS

The veins of the lower extremities frequently become distended, knotted and painful. They do not often show themselves in the first pregnancy, but are apt to appear later in life and become worse with each successive pregnancy. They are very much aggravated by tight garters and corsets, neither of which should be worn during this condition. They are caused and aggravated by any circumstance that is capable of impeding the return of venous blood from the extremities.

A free action of the kidneys, skin and bowels has a tendency to relieve them and I have seen them greatly benefited by Dr. Dye's Mitchella Compound. Rubbing the extremities towards the body aids in emptying them and is beneficial. A well-adjusted laced or elastic stocking is one of the best remedies and can be obtained from a druggist or surgical-instrument maker. A roller bandage applied from the toes to the body answers the same purpose, but is difficult to apply so as to make an even pressure and admit of freedom of locomotion. An elastic perforated bandage is easily applied and retained in place. When neither of these means is available, and the veins are troublesome, the woman should remain in the recumbent position as much as possible or sit with the feet well elevated. An

abdominal bandage so adjusted as to raise the uterus and its contents upward and thus remove the pressure from the large veins as they pass upward through the pelvis will also be effectual.

HEARTBURN

Pregnant women are frequently troubled a good deal by the distressing symptom called heartburn, for which it is customary to resort to alkalies. They merely neutralize the acid that is in the stomach, but do not arrest the causes to which it is due. The use of alkalies interferes with the principle of fruit diet and should be avoided if possible. Heartburn is generally due to an impairment of digestion and in too many cases to over-eating—the food fermenting instead of digesting.

The proper treatment is to avoid it by abstemious living but, if it occurs, try fasting—or skip a meal occasionally. I have found those remedies that aid digestion to be the most valuable in relieving it. Five to ten grains of pepsi.. just before or after a meal will often succeed. Charcoal will be found available in many cases and is less objectionable than alkalies. Five grains of sub-nitrate of bismuth repeated three to six times a day is an effectual remedy. I have often found acids among the best remedies. The following is usually a successful prescription:

Dilute Nitro-Muriatic Acid, .	½ ounce
Water, ...	4 ounces

Dose—A teaspoonful in a wineglassful of water after eating.

It may be greatly aided by diminishing the quantity eaten and also by avoiding saccharine and starchy food.

PILES

This distressing complaint is one of the frequent

annoyances of gestation and may be caused by prolonged constipation or anything that obstructs the hemorrhoidal veins. Those women of a full habit are especially liable to them. Ordinarily, the pile tumors are small and are of little consequence beyond the annoyance they occasion; but when they are large, painful and become inflamed they require the services of a physician, for while an operation for their radical cure is seldom justifiable during pregnancy every effort to obtain relief is a duty. In treatment the first point to be looked after is to secure and maintain a moderately open condition of the bowels. This may be secured by the fruit diet, exercise, bathing and injections. Senna tea is a favorite laxative in this condition. Avoid straining at stool. A piece of absorbent cotton saturated with witch hazel and inserted just inside the anus after stool is a simple remedy worth trying. Wash the parts thoroughly in cool water and apply the following ointment:

Gall Ointment, ...	1 ounce
Stramonium Ointment, . .	1 ounce

Directions—Apply locally morning and night, at the same time inserting a little of the ointment just inside the bowel.

When very painful, relief is sometimes obtained by elevating the foot of the bed a few inches and applying hot fomentations to the affected region. A physician may be needed to open the pile and turn out the small blood clot. The abdominal bandage should be worn. Piles often disappear entirely after confinement.

DIARRHOEA

Looseness of the bowels often occurs as a sequel of constipation or in alternation with it. Some women are troubled with it more or less the entire term, while

others are afflicted with frequent attacks sometimes coming on without any assignable cause. When it occurs as a sequel of the constipation it is generally of a watery character secreted by the lining membrane of the bowels as an effort of nature to discharge the retained waste matter. When not severe it is salutary and relieves headache, heartburn, nausea, etc., and usually regulates itself when the offending materials are discharged. When, however, it is severe or prolonged it should receive proper attention, for then it weakens and predisposes to piles and abortion.

Ordinarily, very little medicine need be given, for rest in the recumbent position and a strict diet will be sufficient.

Should the diarrhoea continue give a dose of castor oil and after it has operated use the following:

Tincture of Catechu, .	6 drams
Laudanum, ...	40 drops
Chalk Mixture to make . .	4 ounces

Dose for an adult—One tablespoonful three times a day.

The following mixture will be found equal to almost any case, having been repeatedly tested by myself and others, and is appropriate to a great variety of cases·

Chloroform, ...	2 drams
Tincture Opium, . . .	1 dram
Tincture Camphor, . . .	2 drams
Tincture Rhubarb to make .	2 ounces

Dose—one half to one teaspoonful, repeated according to the severity of the attack from one to four hours, until relieved. It may be preceded or followed by a mild dose of castor oil, with advantage.

HEADACHE AND NEURALGIA

A very large proportion of pregnant women are troubled with headache and neuralgic pains in the face,

breast or side of the chest. The causes are numerous. The influence of pregnancy upon the nervous system contributes to the production of headache by inducing determination of blood, constipation, indigestion and is liable to aggravate neuralgic, rheumatic and constitutional headache. We can usually do more to cure headache by attention to diet, exercise and overcoming the causes that occasion it than by any special remedies addressed to the head. If it persists after the appreciable causes are removed it will be best to consult a physician. Those who carry out the advice already given in this and the two preceding chapters will not be troubled much with these aches and pains. Bromide of potash and ammonia in solution, as recommended for convulsions, in teaspoonful doses every three or four hours will be apt to relieve these headaches.

For the neuralgic pains in the chest, face or breast use mustard plasters, hot fomentations, hot water bag, hot salt bag or a liniment containing camphor and chloroform. Painful spots may be painted with iodine.

COUGH

A troublesome cough sometimes occurs, but unless it becomes so severe as to prevent sleep or endanger miscarriage by the violent concussion of the abdomen it produces it seldom requires attention. A teaspoonful of paregoric occasionally repeated will usually afford relief, but as I do not desire to use opiates when they can be avoided, before resorting to the use of paregoric I would try a teaspoonful of either of the following:

Tincture Colinsonia, . . .	1 dram
Water, ...	4 ounces

Mix.

Or

Tincture Drosera, . . .	2 drams
Water, ...	4 ounces

Mix.

Or

Tincture Red Clover, . .	1 dram
Water, ...	4 ounces

Mix.

Or, an infusion of red clover may be drank in small quantities.

This does not apply to diseases of the lungs, as consumption or bronchitis. Such diseases need experienced professional advice.

PRURITUS, OR ITCHING

Some women will be troubled with intolerable pruritus, or itching, of the genitals and adjacent parts. While it is occasionally met among women not pregnant it is more often an accompaniment of gestation. It frequently occasions the most exquisitely excruciating agony. The desire to rub or scratch the parts may be almost irresistible even during sleep, and the skin may become excoriated and sore. The itching may be purely nervous in origin, but may also result from irritating and acrid vaginal discharges and from such diseases as diabetes, jaundice or Brights disease. Absolute cleanliness—the frequent use of water—is one of the first requisites of relief, and to this end we can heartily endorse Dr. Shew's advice in regard to the use of the sitz bath. Maintain the most perfect cleanliness of the vagina and those structures that can be in any way influenced by its secretions. The sitz bath may be used as often as the itching returns—several times a day. After the bath a lotion of borax in water may be applied, say one ounce of borax to a pint, or two teaspoonfuls of aromatic spirits of ammonia in a glass of water,

or sulphite of soda, one ounce to the pint, applied freely. These lotions may be applied successively until relief is obtained.

The following lotion used after bathing the parts will often succeed when others fail.

Borax, ...	2 drams
Oil of Peppermint, . . .	6 drops
Hot Water, ...	1 pint

Directions—Use locally as a lotion.

Nervous women suffering from local pruritus should take asafoetida or valerian pills, but when the trouble is caused by constitutional diseases she should place herself in the care of her family physician for proper treatment.

Occasionally there is an itching of the whole body without any rash or eruption on the skin. Relief can often be obtained by a prolonged soda or alkaline bath followed by a smearing of the skin with plain or carbolized vaseline.

FAINTING

It may occur at any period of gestation, especially when tight lacing is indulged in or the woman has to remain long in heated rooms or bad air. It is especially liable to occur at "quickening." It is to be treated the same as when it occurs at other times. Lay the patient in an easy position, the head low, and loosen the clothing; allow the cool air to blow in the face; sprinkle a little water in the face or have her inhale the fumes of ammonia or "hartshorn" as it is more commonly called. Camphor may be rubbed upon the face and neck. Avoid excitement or alarm. She should remain in a recumbent position until entirely recovered.

In the interval between the attacks a 3-grain pill of asafoetida after meals should be given to nervous, hysterical women in whom fainting spells are most likely to occur.

PALPITATION

This is a frequent annoyance and is most liable to occur in nervous women and those who pay too little attention to the rules we have already prescribed. In the early months it is generally sympathetic, but later on is usually caused by the enlarged womb interfering with and embarrassing the action of the heart.

Pale, nervous women suffering from palpitation need fresh air, easily-digested food and a good iron tonic. Asafoetida sometimes does good and a belladonna plaster applied over the heart often gives relief. The bowels should be regular. Palpitation often disappears at the time of lightening—about two weeks before confinement.

MOTH OR LIVER SPOTS

When these spots occur on the face they are very annoying to some. The general supposition is that they cannot be removed. Painting them once or twice with the compound tincture of iodine (Lugol's solution) will usually remove them. Those who would object to the color of the iodine while it remains may try the colorless tincture of iodine. Apply thoroughly.

A good lotion is:

Corrosive Sublimate, . . .	1 grain
Tincture of Benzoin, . .	½ dram
Almond Emulsion, . . .	1 ounce

Directions—Apply to discolored spots night and morning.

Warning—Corrosive Sublimate is very poisonous, and care should be taken that none of the lotion gets into the eyes.

Many cases have been cured with the following ointment:

Ammoniated Mercury, . .	1 scruple
Subnitrate of Bismuth, . .	1 dram
Vaseline, ...	1 ounce

Directions—Apply to spots night and morning.

TOOTHACHE

The frequent occurrence of toothache in pregnancy explains the origin of the old proverb "For every child a tooth."

Warm applications and other home remedies should be used until a dentist can be consulted. In the average case there is no good reason why a tooth should not be treated or extracted or a cavity filled during pregnancy just as at other times. But long, tedious operations on the teeth, such as crown and bridge work, should be postponed until after confinement.

IRRITABILITY OF THE BLADDER

Many women suffer during the entire term of pregnancy from an almost constant desire to empty the bladder, compelling them to urinate every few minutes, passing a few drops at a time with pain and burning.

In the early months it may be due to mechanical irritation from pressure of a displaced uterus against the neck of the bladder, and later on from pressure upon the body of this organ. In numerous other instances, however, it cannot be attributed to any such mechanical cause, but is due to some abnormal condition of the bladder itself. Usually, the urine is not increased in quantity, but rather diminished and often scalding.

The measures already advised in the chapter on hygiene and diet will usually prevent this trouble, or the employment of Dr. Dye's Mitchella Compound

will overcome it, but occasionally a case may resist these means. I would then advise:

Fluid Extract Populus, . .	1 dram
Water, ...	2 ounces

A teaspoonful every two or three hours till relieved, to be renewed if the trouble occurs again.

I have also found the homeopathic remedies, cantharis or apis, to relieve this condition. I have employed them by putting five drops of the mother tincture in half a glass of cold water and giving a teaspoonful every hour until relieved. As soon as relieved stop taking them. A tea made of couch grass, slippery elm or flaxseed drank freely is a very efficient remedy for this complaint. Five drops of the tincture of nux vomica in a little water three times a day for a week or two is a useful remedy. If the bladder be inflamed a five-grain tablet of urotropin should be taken three times a day and a physician consulted as to the advisability of washing out the bladder.

NERVOUSNESS

Those who are subject to nervousness know what it is without any special description. The nervous system is impaired, irritable, and though there may not be any pain the sensation is even worse; no position seems the proper one; a general uneasiness prevails without nausea; no special organ appears to blame, and yet in the majority of cases there is a general impairment of function. We can accomplish much in improving the general condition by the dietetic and hygienic means already laid down; but the peculiar nervousness will, in many cases, demand special prescriptions. Do not resort to opiates

or Dover's powders, morphine, or chloral hydrate, lest you become habituated to their use. When these drugs are used it should be under the supervision of a competent physician.

Dr. Dye's Mitchella Compound is an excellent remedy to allay nervousness. An infusion of lady slipper or American nervine is often used, with good results. Under the influence of either of these medicines quiet sleep is encouraged and a general improvement is induced. A pill of asafoetida three times daily after food often does much good. When the above remedies are employed it is seldom indeed that narcotics will be required.

CONVULSIONS

It is not best to rely upon unprofessional advice in case of convulsions, though until the physician arrives the following may be given in teaspoonful doses every half hour or hour:

Bromide of Potash, . . .	1 dram
Bromide of Ammonia, . .	1 dram
Water, ...	1 ounce

Mix.

A host of remedies have been tried in this ailment and many plans advised, but as professional aid must be employed we do not think it best to advise, particularly as it does not come within the scope of a popular work.

SWELLING OF THE HANDS AND FEET

The same causes that operate to produce varicose veins may give rise to swelling of the feet and hands and in rare cases of the whole body. The swelling of the extremities will usually be of a dropsical character, pitting upon pressure. Obstruction to the return

current of blood through the veins causes an infiltration into the cellular tissues of a watery fluid and is quite a common ailment of pregnancy. During the night or while lying down it usually diminishes considerably, to reappear when the extremities are again placed in the most dependent position. Of course, it may be induced by diseases of the heart, liver and kidneys, but when these maladies are not present it is pretty safe to suppose that it depends upon pregnancy and will disappear entirely after delivery. It seldom requires any special attention further than what can be secured by bandaging as advised for varicose veins, the recumbent position, the fruit diet and the use of Dr. Dye's Mitchella Compound. I have seen the latter perform wonders, almost, in this ailment and it is safe and applicable to the general aspects of the woman as well as to a special symptom. The free action of the kidneys favors relief. There are very many of the more vigorous diuretics which can be employed with benefit, but as they will be so rarely needed when the hygienic, dietetic and remedial measures already prescribed are employed I will leave their employment should necessity for them arise to the physician who sees the case. For my own part I have found the directions I have already given to be equal to the necessity, even if they are simple.

LEUCORRHOEA

Leucorrhoea, an exceedingly prevalent affection, is usually due to the existence of some disease of the uterus or vagina of which it is a symptom. When it has existed prior to conception it is very apt to continue and often gives rise to very great annoyance from the debility, soreness or irritation it causes.

The treatment will be essentially the same as when it occurs in those who are not pregnant, though instrumental treatment will be inadmissible. Absolute cleanliness is essential; the sitz bath is excellent. The decomposition of the perverted secretions gives rise to irritation and must be overcome by ablutions, injections, etc.

Injections may be made of tepid water or soap suds or they may be medicated. They should be used daily or oftener to be of any use, and no force should be permitted. An infusion of white pond lily root is an injection in which many have great confidence. Carbolic acid, five grains to a pint of water used at a sitting, is an excellent disinfectant and exerts a control over the abnormal discharge. Common soda, a teaspoonful in a pint of water is good; astringents in the form of infusions may be used. Hemlock bark, oak bark, golden seal root, crane's bill are all applicable, but should not be used too strong. As a rule, an ounce or less to a pint of hot water standing till cold and used after the proper steps to secure cleanliness will be about the strength adapted to the majority of cases.

The list of remedies for this complaint could be greatly enlarged, but as some of them might have a tendency to cause miscarriage I have purposely avoided them. The discharge being a symptom of disease of some portion or portions of the reproductive organs the proper time to pay the most attention to its cure is when the delivery has passed; hence, simple means only are recommended, first and foremost of which is cleanliness.

SLEEPLESSNESS—INSOMNIA

Inability to sleep is particularly annoying to pregnant women and should receive prompt attention, for if long continued it may give rise to serious consequences. It may be due to lack of exercise or too steady confinement in heated rooms. Dyspepsia is a common cause and should be overcome by a well regulated diet and avoidance of late suppers. Tea and coffee may be reckoned among the causes and should not be taken in the afternoon or evening by those who are apt to be wakeful. Reading anything exciting in the evening, writing or any severe exercise of the mind has a tendency to prevent sleep. Incorrect living is the underlying cause and to correct it is the first step towards cure, and if the cause can be appreciated and understood we shall succeed.

The sleeping room should be well ventilated and quiet—neither too warm nor too cold. A regular hour for retiring is advisable. A glass of hot milk before retiring may aid in inducing sleep, and a warm bath taken at ninety to ninety-six degrees just before going to bed will often prove a valuable remedy. A rapid sponging and rubbing the surface of the body has much the same effect. It is not advisable to take opiates if possible to avoid them, and for this reason we will not give any recipe for them nor for those other abused drugs, chloral hydrate, sulphonal and trional. When taken let their use be sanctioned and directed by a physician who can observe their effects. The remedies recommended in the beginning of this chapter usually control any unnatural excitement, allay irritability and nervousness and produce sleep.

CRAMPS—HIP-ACHE—SCIATIC PAINS

Some women are very much annoyed by cramps or spasms in the lower extremities, often worse at night, resulting from pressure of the enlarged uterus on the sacral nerves. The pain sometimes shoots down the thigh as far as the knee or may be localized in the hip-joint (hip-ache). Women who suffer from habitual constipation or displacement of the womb and those in whom the child is large and heavy are as a rule more bothered with cramps than others.

The bowels if constipated must be thoroughly emptied by laxatives and copious rectal injections of soap-suds containing castor oil, Epsom salts, glycerine or turpentine. The womb if displaced or tilted should be restored to its proper position by a physician. If the cramps are due to a large and heavy child the woman should wear loose clothing and when lying down should turn frequently from one side to the other, so that the pressure shall not be too long continued upon those nerves that are distributed to one or the other extremity, and avoid lying on the back long at a time as that position is most apt to bring pressure upon the large blood vessels and plexuses of nerves. Frequent changes and brisk friction with the hand are better than drugs. A properly constructed abdominal bandage so arranged as to support the enlarged abdomen and rather lift it by straps from the shoulders will often put an end to this disagreeable symptom.

Much benefit often comes from assuming the knee-chest position. Pale anemic women will get gradual relief as the health improves under the influence of fresh air, generous diet and a good iron tonic. Nervous

women should take bromide of potash or asafoetida in the way advised in other parts of this book.

SALIVATION

When the saliva is formed in such excess as to prove annoying, the bowels should be kept quite free with Epsom or Rochelle salts, a lozenge containing tannic acid or chlorate of potash allowed to dissolve slowly in the mouth every few hours, and tincture of iodine painted over the salivary glands at the angle of the jaw. Bromide of potash taken internally produces the best results.

THE BREASTS AND NIPPLES

During pregnancy the breasts and nipples should be prepared for the very important duty they must perform after the baby is born. They should have ample room to grow and enlarge and should be protected from pressure or injury. They should be washed twice a day with soap and warm water, great care being used to remove as gently as possible crusts and branny scales from the nipple. After being thoroughly dried they should remain uncovered and exposed to the air for twenty or thirty minutes. In the last month or two a little cocoa butter, castor oil, borated vaseline, cold cream or albolene should be smeared over the nipple at bedtime to soften the skin.

If the nipples are small or sunken they should be gently drawn out two or three times a day during the last month or two of pregnancy, but no unnecessary force should be used, as rough manipulation may cause cracks or fissures in the nipple. Every effort should be used to keep the nipples soft and pliable and no attempt should be made to harden them by the use of alum, tannic acid, alcohol or other astringent, as was the

former custom. In those exceptional cases, however, where the skin is thin, tender and sensitive there is no objection to the use of witch hazel or the following lotion for a week or two:

Tannic Acid, ...	1 dram
Glycerine, ...	½ ounce
Rose Water, ...	½ ounce

Directions—Apply daily to nipples and surrounding skin.

CHAPTER X

MISCARRIAGE

The interruption of pregnancy by the expulsion of the child before the seventh month is called a miscarriage or abortion, and when it occurs at any time from the seventh month up to about two weeks before full term it is known as a premature birth.

Miscarriages are most likely to occur in the early months, usually at a time corresponding with what would have been a menstrual period, and often pass unrecognized. They are most frequent in women who have previously had children. Women who marry late in life are more prone to miscarry than those who marry early in life.

Some women are habitually liable to miscarriage when they reach a certain stage of gestation, and a woman who has been once the subject of this accident is much more liable to a repetition of the occurrence than one who has not. In early married life the idea often obtains that children are not desirable, for some reason or other, and not succeeding in preventing conception a worse crime is resorted to. How many women have found to their sorrow that the damage they then do lays the foundation for a miscarriage at every

succeeding pregnancy. For this reason alone hundreds of homes are lonely and desolate.

CAUSES OF MISCARRIAGE

Some miscarry at a certain time without any assignable cause. Any violent exertion, anything that occasions a shock or spasmodic action of the abdominal muscles, the irritation of piles, excessive sexual indulgence, a blow, a fall, violent emotion, nursing, riding over rough roads, missteps, running a sewing machine, stretching the arms above the head, tripping, heavy lifting, hot sitz and foot baths, tight lacing, hot vaginal injections, abuse of cathartics, disease and displacement of the womb, affections of the ovaries, the occurrence of fevers and eruptive diseases, excessive vomiting, weakness, plethora—any excitement that is capable of exciting contraction of the uterus is liable to terminate in miscarriage. The occurrence of this accident in the first pregnancy is very apt to establish the habit.

SYMPTOMS OF MISCARRIAGE

These are rather variable, of longer or shorter duration, from a few hours to several days, and the consequences are equally various. Symptoms that give warning of an approaching miscarriage sometimes occur and, therefore, when a pregnant woman has more or less severe aching pain in the back, nausea or vomiting, frequent urination, pains shooting through the bowels, languor, uneasiness and a mucous or watery discharge from the womb she should remain quiet in bed and send for her physician so that prompt and proper treatment may be given.

In the majority of cases hemorrhage or bleeding from the womb is the earliest symptom of miscarriage. It varies greatly in amount—sometimes being very

slight, in other cases so sudden and profuse as to cause the greatest anxiety. The bleeding may continue steadily or interruptedly for hours or even days before the pains come on, and large clots of blood are often passed before the fœtus is expelled.

The pains are caused by the contractions of the muscles of the womb and at first are usually slight, of short duration and recur at long intervals. Later on they become more frequent and regular and so strong and forceful that, aided by the voluntary expulsive efforts of the woman, the fœtus with membranes and afterbirth is expelled. Sometimes the pains are like those of actual labor and many women have declared that miscarriage pains are more severe, harder to bear and less easily forgotten than those of labor itself. The mouth of the womb for physiological reasons is not as readily dilated as at the full term and, in consequence, more prolonged efforts are usually necessary and greater suffering experienced.

Sometimes the fœtus will be expelled with little pain, scarcely any hemorrhage and a quick recovery. In other cases it may come on with hemorrhage, and after a protracted and painful labor the fœtus will be expelled. The placenta or afterbirth or the membranes may remain and not come away for several days. So long, however, as the placenta or membranes or any part of them remains in the womb there is danger of hemorrhage and blood poisoning.

Preceding, accompanying and sometimes following the miscarriage there may be alarming hemorrhage. It may be internal or external. When external, the patient and friends may be deceived until a fatal termination is the result. When internal, the patient gets

pale and faint, exhausted; the pulse becomes quick and thread-like; there will be headache, shivering, pain; the abdominal cavity fills up and becomes larger than the stage of pregnancy will warrant; after a time the membranes give way, the floodgates of life are opened and the vital current escapes with a gush. The woman may die from internal hemorrhage without its escape. The more nearly the woman has approached the natural term for delivery the less the danger. Ordinarily, the hemorrhage constitutes the primary danger and it usually cannot be perfectly and permanently controlled after the progress of the labor has well advanced until the contents of the womb are expelled and the organ has contracted. The hemorrhage is sometimes alarming, profuse, fatal.

MANAGEMENT OF MISCARRIAGE

Three indications present themselves from which a selection is to be made:

First, to prevent its occurring, if possible.

Second, to arrest it.

Third, to carry the patient safely through the process, provided it cannot be prevented or averted.

If aware that a patient is in the habit of aborting I should advise the hygiene and diet already recommended and a Mitchella Compound Tabule before each meal and at bedtime. This, with *perfect* rest in the recumbent position, a cool room, absolute quiet, a calm, unruffled mind, unstimulating food, regularity of bowels and the avoidance of sexual relations are the essentials of success.

If we can carry the patient past the fifth month we shall generally succeed. Regulate the bowels with some

of the means already mentioned and, if the irritability of the uterus continues, we must resort to opium—a grain in powder or pill every four hours until all pain is relieved, to be repeated if it recurs. The action of the opium is as positive as anything can be and, if the symptoms are active, alternate it with the fluid extract or strong infusion of cramp bark. This is as its name implies a potent remedy and has stood the test of years. It may be given freely. It is said that the planters of the South formerly compelled their pregnant slave women to drink an infusion of it in order to frustrate their attempts at abortion. When hemorrhage and pains occur together there is very little chance of preventing threatened miscarriage.

Should our efforts fail in preventing the miscarriage it must be managed like a case of labor (which see). Hemorrhage being the greatest danger, if it becomes too free I would give five grains of gallic acid in a wineglass of cinnamon water and repeat as often as may be necessary or, if cinnamon water or tea is not at hand, I would not wait, but use plain water. Cinnamon is, however, valuable of itself.

Care must be taken to assure the entire removal of the placenta and membranes. There will be danger until everything "has come away." Should bleeding persist or the discharges acquire an offensive odor it may be necessary for the physician to scrape or curette the womb.

The greatest possible cleanliness should be observed. The external genitals should be frequently washed with soap and hot water and an antiseptic solution, and diapers and bed linen kept scrupulously clean. A woman should receive the same care after a miscarriage as

after a full term delivery and should remain in bed for ten days or two weeks. If this advice were more generally followed there would not be nearly as many women suffering from so-called "female weakness."

It we can ascertain the cause of abortion we can usually overcome it or remove the patient from the sphere of its operation.

It is not expected that the unprofessional reader is going to rely implicitly upon the directions we have given. In cases that are alarming or troublesome a physician must be called—one who can determine the questions that may present obstacles to others. Our wish is to furnish means of prevention, and aid the physician in arresting or conducting the process of miscarriage.

Among the results to the mother other than death from either accidental or artificial miscarriage are the whole train of ailments of the reproductive organs of women. Displacements, inflammations, ulcerations, deformities, ovarian disorders, leucorrhoea, irritation of the bladder, barrenness, mental disturbance, general ailments, etc.

Although many women are subject to these diseases who do not miscarry, it is nevertheless true that they are the bane of woman's existence. They are often regarded as incurable and under the old regime they generally were, but in the light of a proper understanding of the principles of these ailments and the remedies at our command I have been able to cure many after they had been pronounced incurable by others.

Abhorring the harsh treatment of the past it will doubtless be a source of comfort to many an afflicted

woman to know that by properly considering the constitution, the disease and its complications we can generally send medicines to use at their homes that will restore them to health. Symptoms are the language of diseases and for the most part are intelligible. Knowing this it will place a cure at the disposal of thousands who could not travel hundreds of miles to consult the physician of their choice.

Although this may appear incomprehensible to some and be opposed by those specialists who can do nothing without the "speculum and caustic" it is none the less true that applying these principles to practice I am constantly curing patients whom I have never seen, many miles away.

CHAPTER XI

PREPARING FOR CONFINEMENT

ARTICLES TO BE PROVIDED FOR CONFINEMENT

To save unnecessary confusion at the time of labor every expectant mother should, some weeks before her expected confinement, get together those things that will be needed for the proper care of herself and her child. The following is a fairly accurate list of necessary articles and it is a good plan to place all of them in a specially prepared box or dresser drawer reserved for this one purpose:

1 Rubber sheet or oilcloth as large as the mattress.

1 Small rubber sheet, 1 yard wide and 2 yards long, to be used under the hips.

2 Porcelain or granite basins.

1 Porcelain or granite bedpan.

1 Two-quart fountain syringe.

1 Pail or slop jar.

6 Towels.

2 Water pitchers.

1 Small bottle of antiseptic tablets (corrosive sublimate).

1 Pound absorbent cotton.

1 Can (5 yards) borated or carbolized gauze.

20 yards sterilized cheesecloth for pads or napkins.

2 Abdominal binders.

2 Breast binders.

4 T-bandages for pads or napkins.

Narrow tape (bobbin) or braided silk for tying the cord.

2 Dozen safety pins (large).

Castile soap.

4 Ounces whiskey or brandy.

4 Ounces lysol.

4 Ounces saturated solution of boracic acid.

4 Ounces Cacao butter, sweet oil or albolene.

1 Small blanket in which to place the baby.

1 Crib or basket for the baby.

Baby clothing.

CONFINEMENT OR LYING-IN ROOM

The average confinement occurs in the room ordinarily occupied by the expectant mother as a bedroom. But when a choice of several rooms can be made it is advisable to select one that is large, easily ventilated and with a sunny exposure. An open fireplace is very desirable. The nurse should see to it that the room is at all times pleasant and cheerful and that all unnecessary draperies and furniture are removed. A confinement should never occur in a room recently occupied by a person suffering from scarlet fever, measles, erysipelas or other contagious or infectious disease unless the room has been thoroughly fumigated and disinfected.

CLOTHING WORN DURING LABOR

When symptoms of labor appear, the woman should take a tub or sponge bath and change all her linen. A clean nightgown should be put on and, over it, during the first stage, a loose wrapper or kimona. The chemise and nightgown should button in front and not be too long, so that they can be readily changed

when soiled. No clothing should be worn suspended by bands at the waist.

THE CONFINEMENT BED

When it can be had, a lounge or cot-bed properly arranged is the most convenient couch on which delivery can take place, for it permits to the best possible advantage the assistance of the attendants; can be readily moved to suit any necessity, and preserves the bed in which she must subsequently lie dry and comfortable. This temporary bed should be moderately hard and firm, so that it may not sag downward beneath the hips of the woman; the head should be a little the highest, and the foot provided with a convenient, narrow footboard at an agreeable angle of inclination, against which she may press with her feet during her expulsive efforts. A sheet should be twisted into a cord and fastened to the foot-piece for her to grasp in her hands and pull upon during the "bearing down pains." It is needless to add that this temporary bed should be of sufficient width for convenience, that she may turn herself from one position to another to lessen the fatigue of unnecessary restraint.

HOW TO PREPARE THE BED

The large rubber sheet is placed on the mattress and tightly pinned at each corner. This is covered with a linen or cotton sheet and also a draw-sheet tightly tucked under the mattress. Over the draw-sheet are placed the small rubber sheet and a second draw-sheet (made by folding an ordinary sheet into four thicknesses) that should be tightly pinned at each corner so that it may not be easily pulled out of place. After labor, the small rubber sheet and the upper draw-sheet can be easily removed with the other soiled clothes.

THE ABDOMINAL BINDER OR LYING-IN BANDAGE

Though some physicians declare that the bandage or binder is useless or even harmful, we always advise that one be put on, because if properly fitted it certainly adds to the comfort of the newly-made mother by overcoming the feeling of emptiness that exists after the baby is born. Two of these binders should be made from unbleached cotton or muslin some weeks before confinement. The binder should be a yard and a quarter long and half a yard wide or wide enough to reach from the hip bone to the lower part of the breast bone. When first put on it should be pinned from below upward and be fairly tight. When there is any tendency to excessive hemorrhage or flooding, a pad or compress made of two or three folded towels should be placed over the womb beneath the binder. The binder is rarely needed after the first week or ten days.

THE BREAST BINDER

A binder or bandage is often needed to make pressure on the breasts or to hold poultices, fomentations or other applications in place. The Murphy

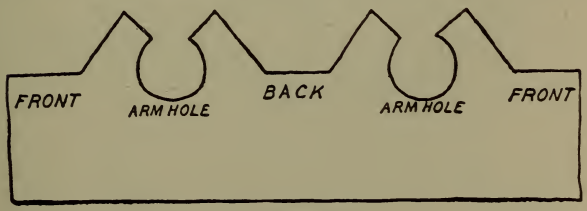


Figure 11

breast binder is an excellent one, and is made from a double fold of muslin long enough to go around the body and wide enough to reach from the neck to the waist. The edges should be stitched and

on one edge notches cut for the neck and each arm. Small safety pins are used to pin it in front and over the shoulders and to form darts under the breasts.

A breast bandage made like a Y from three toilet napkins is preferred by many. Pin two napkins together to form a V and fasten them to the middle of one end of the third napkin. Pass the single napkin across the back; carry the two napkins over the chest, one above and one below the breasts, and pin to the single napkin. This bandage is often used to support or hold up the breasts.

BABY'S BASKET

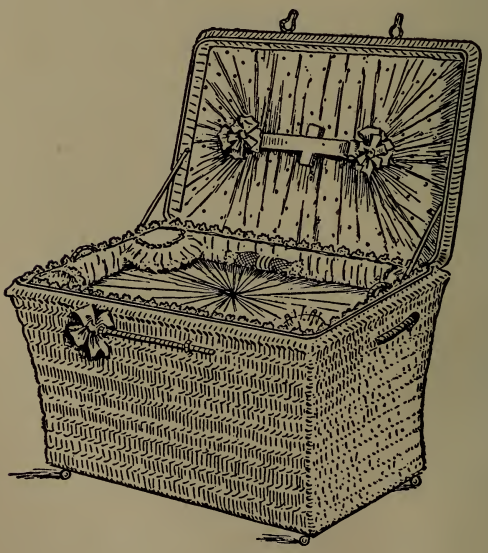


Figure 12

It is a great convenience to have a basket or box in which to place all those things needed for the care and

toilet of the baby. Many stores carry many different styles of such baskets, but one that will prove in every way suitable can be easily and cheaply made at home. A basket with a lid—hamper style—2½ feet long, 15 inches wide and 8 inches deep, is about the right size, and when covered and lined with some dainty material is both attractive and useful. Pockets may be placed at the corners and a pincushion on the under side of the cover.

The basket should contain the following articles: Castile soap, bath thermometer (Fig. 13), pincushion,

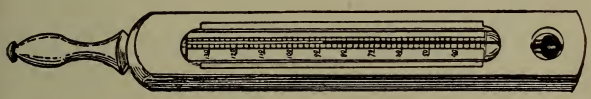


Figure 13

several sizes of safety pins, washcloths, powdered stearate of zinc, toilet powder, bottle of pure olive or sweet oil, jar of cacao butter or well washed lard, solution of boracic acid, absorbent cotton, some old

Figure 14

linen handkerchiefs or pieces of soft linen, baby comb and brush, infant's syringe (Fig. 14), medicine dropper (Fig. 15).

Figure 15

BABY'S BATHTUB

A large porcelain basin will answer very nicely for baby's first sponging, but for later baths a porcelain or white enamel baby bathtub should be provided.

BABY'S WARDROBE

The quality and amount of clothing will necessarily vary according to circumstances, and the following list is therefore intended simply as a guide to the expectant mother:

2 Flannel binders 18 inches long and 5 inches wide, with pinked edges. These are used for the first two months.

2 Knitted bands with shoulder straps. They should be made of wool in the winter time, of cotton in summer.

6 Shirts—wool for winter, cotton for summer.

4 Flannel petticoats.

4 Muslin petticoats.

8 Slips or dresses.

6 Nightgowns made of light weight flannel.

6 pairs socks.

4 dozen diapers of cotton diaper cloth.

2 Flannel or knitted blankets for wrapping about the baby.

BABY'S BED

A wicker bassinet or even a clothes-basket is the best bed for a new-born infant. The possibility of the child being smothered or rolled upon and the harm that might result from too frequent nursing constitute strong reasons why the babe should not sleep in the same bed as the mother. When the baby is four months old it may be placed in its own bed or crib.

The hair mattress should be protected by a rubber sheet on which is placed a bed pad made of a yard-square piece of mattress covering. The bed sheet should be large enough to allow it to be well tucked under the mattress. The pillow should be of fine curled hair and large enough to support both head and shoulders. Light-weight flannel blankets and wool or cotton comforters will be all the bed covering that is required. Good habits should be taught from the first, and the baby should not be taken up every time it cries nor quieted with so-called soothers, pacifiers or hushers.

CHAPTER XII

MANAGEMENT OF LABOR

At the expiration of nine calendar or ten lunar or menstrual months or, more definitely, two hundred and eighty days after conception the fœtus having advanced far enough in physical development to maintain an independent existence is separated from the mother by a natural process termed labor or *childbirth*.

It is possible for the fœtus to survive if this process should occur at an earlier period, and instances are not uncommon of survival at the end of the seventh month or even earlier, and instances are reported where the infant has survived birth at the end of five months; but it must be conceded that such cases are extremely rare.

When labor occurs before the end of the ninth month it is said to be *premature*.

On the other hand we have abundant and well authenticated evidence to show that pregnancy may be protracted beyond the customary period of two hundred and eighty days without any serious detriment to either mother or child. It ordinarily occurs within a few days of the average time. The laws of nature, however, are not absolutely invariable, and

no harm need be apprehended should the deviation amount to two or three weeks.

Considerable difference of opinion exists among scientific physicians regarding the extreme limit of variation. The French have enacted in their *Code Napoleon* that a child born within three hundred days after the death or departure of the husband, or one hundred and eighty days after marriage, shall be declared legitimate. This code admits that the legitimacy of a child born beyond three hundred days may be contested. In America, however, no fixed or stated time is made and each case must be settled on its own individual merits.

Prof. Meigs published a case, which he regarded as trustworthy, of the prolongation of the *pregnancy to four hundred and twenty days or sixty weeks—fourteen months—or five months beyond the ordinary term.* I merely mention the fact without any expressions of belief or doubt. Prof. Atlee mentions two cases of prolongation to three hundred and fifty-six days. Out of one hundred and sixty cases Dr. Elasser found that eleven were protracted to a period varying from three hundred to three hundred and eighteen days. Sir James Y. Simpson mentions four cases in his own practice in which pregnancy was protracted to three hundred and thirty-two, three hundred and twenty-four and three hundred and nineteen days respectively.

The time elapsing between the end of the seventh month and delivery appears to be more for the purpose of perfecting such fœtal development as has been already begun than for any new development essential to the maintenance of life. During this time the various organs become more capable of carrying on the

functions for which they were destined, and it is during this time that the greatest proportionate increase in size and weight occurs.

WHY DOES LABOR OCCUR AT THE END OF THE NINTH MONTH?

The cause of labor at this particular period is shrouded in more or less of mystery, yet the opinion seems to be gaining ground that it is due to changes in the structure of the placenta and its membranes or as they are more commonly called the *afterbirth.* The fœtus being capable of maintaining its independent existence, the destiny of the placenta as a connecting link between mother and child has been fulfilled and it undergoes retrograde metamorphosis—fatty degeneration—its attachments to the walls of the uterus are gradually severed and the separation has been so far completed by the end of the ninth month that its expulsion as a foreign body becomes necessary, which is effected by the uterine contractions immediately or very soon after the birth of the child to which it is yet attached by the *cord.*

A PHYSICIAN SHOULD ALWAYS BE PRESENT

In the following directions for conducting a labor it is not presumed to interfere with the duties of the medical attendant who should be present from the beginning to the completion of the process. Neither is it expected that the readers will assume the responsibility of management, but it is hoped that by these and the foregoing directions the patient and physician may be aided, the labor rendered short, safe and easy.

PREMONITORY SYMPTOMS OF LABOR

These are generally manifested for a period of time

varying from one to two days to as many weeks. Subsidence of the abdomen is one of the most prominent. The stomach and lungs being greatly relieved of the pressure which they have borne for some time, the sense of oppression occasioned by this pressure disappears and the woman feels unusually well, buoyant and light. This symptom is known as "lightening" and may be so deceptive that she will venture abroad, and perhaps by her unusual efforts induce labor under ludicrous and annoying circumstances. Women who have borne children attach considerable importance to this sign. Another sign is an increased fullness of the external parts and a discharge of mucus from the vagina that is sometimes tinged with blood and may become so profuse as to necessitate the employment of a napkin. This is known as the "show." The discharge is an important sign, particularly if accompanied by a chill and the fullness of the parts above mentioned, and is usually followed by labor in the course of twenty-four hours. There may be painless uterine contractions and a sense of anxiety experienced, fidgetiness, sometimes a depression of spirits and other symptoms of less importance.

SYMPTOMS THAT SHOW THAT LABOR HAS COMMENCED

Indications that labor has begun are at first more or less variable and deceptive. There is apt to be a desire to pass urine frequently and evacuate the bowels. In many cases there will be a marked chill. The "show" to which reference has already been made is a symptom of great value, as it is soon followed by the "pains" which recur periodically at intervals of an hour or less. These pains may be false or true.

False Pains.—In the last week or two of pregnancy false pains often annoy women, especially those who have previously borne children. They sometimes closely resemble actual labor pains, but they have a tendency to constantly shift from one part of the abdomen to another, are not attended with any increase of the vaginal discharge nor any dilation or opening of the mouth of the womb. A dose of castor oil, a soap-suds enema, a hot bath or drink will often cause them to disappear.

True Labor Pains, on the other hand, commence in the lower part of the uterus; are first felt in the back and gradually extend to the front and into the thighs, recurring with regularity and increasing severity, power and frequency, until having attained their greatest intensity they remain stationary a moment and then subside, and are followed by an interval of repose. They dilate the neck of the uterus and protrude its contents. During the continuance of a "true" pain if the hand is placed upon the abdomen over the uterus this organ will be felt contracting and becoming harder with the pain as it advances and to become softer again as the pain passes off.

Having already pointed out the means by which the pains of childbirth are to be avoided and using the term pain so freely in this chapter may seem rather inconsistent or paradoxical, but it is only apparently so. Heretofore we have used the term pain to indicate distress and suffering, but in this connection we use the term to signify uterine contraction which, as has already been shown, may be painless. The reason for this paradox is that by common consent the word "pain" in obstetrical parlance is used

synonymously with uterine contraction which is, under ordinary circumstances, attended or immediately followed by suffering more or less severe. With this explanation the author hopes to be forgiven if he continues to use the term according to custom.

True labor pains exhibit different characteristics, according to the stage of the process. At first they are "cutting" or "grinding," short, severe, situated in the back, extending to the abdomen, loins and thighs, and are confined to the first stage of labor while the neck or mouth of the womb is dilating to admit of the exit of the child. As the first stage changes to the second, the pains become "forcing" and "bearing down." The woman can no longer conceal them if she should wish to, but involuntarily she aids them with expulsive and straining efforts. During the first stage the suffering may be considerable if any abnormal condition exists, and the patient will be apt to be irritable, restless, peevish and perhaps despondent; she desires to be constantly changing position, but as the pains become more forcing in character this condition passes off, and instead of wishing to avoid or retard them she involuntarily does everything in her power to aid them.

THE EXAMINATION

Any question that may arise during the progress of the labor is to be settled by the medical attendant, and as early as possible after the labor has begun a thorough vaginal examination should be made by him with a view to determine the progress of the labor and the presenting portion of the child. It should be made early, so that any malposition may be corrected before advancement renders it difficult. Frequent

examinations are unnecessary, increase the danger of infection and are often obnoxious to the lying-in woman.

THE PATIENT'S POSITION DURING LABOR

During the progress of labor the position of the patient is one of considerable importance, yet I do not believe in compelling the patient to remain in any *one* position. During the first stage of labor there is no good reason why she may not remain up and about the house if she chooses, and even when the delivery takes place the position is more a matter of choice and convenience than necessity. Nearly all works on the subject of midwifery mention the position on the left side as the desirable one, and some attendants insist that the woman occupy this position from the beginning of the second stage of labor to its completion. So far as my observation goes, few women select this position themselves. Some will get upon their hands and knees upon the floor, a few in various other positions; but by far the largest proportion prefer lying upon the back with the head elevated, the knees bent, the feet braced and the hands grasping something upon which they may pull during their expulsive efforts. The safety of the child and the attention the mother will immediately require are the most important considerations to be observed in the selection of position, and there is little or no objection to a frequent change of position up to the last moment if they desire.

QUIETNESS, SYMPATHY AND ENCOURAGEMENT ARE ADVISABLE

The room is to be kept as quiet as possible—not too dark nor too light—and at a temperature most agreeable to the patient. Too many persons should not be allowed in it, and those should be the ones

chosen by the patient herself beforehand and should be selected on account of their confidential relations to her, their sympathy, good sense, experience and endurance. No conversation should be permitted that is disagreeable, exciting or depressing. She needs sympathy, encouragement, confidence and fortitude. Nothing can be worse than to have those upon whom she relies filling her mind with fear or discouragement. Their sympathy must never permit them to give vent to sorrow by expressions of grief.

FIRST STAGE OF LABOR

If, during the first stage of labor, the examination reveals the mouth of the womb hard and rigid and not dilating as it should, pain frequent and tormenting, I would expect speedy relief to follow the administration of the following prescription:

Fluid Extract Lobelia, . .	15 drops
Water, ...	2 ounces

Dose—A teaspoonful every fifteen minutes until relieved.

It not unfrequently happens when this is the case that nausea and vomiting occur, which seems to be nature's method of overcoming this opposing rigidity and exciting the mucous secretions for the purpose of lubricating the passage and expediting delivery.

The bowels should always be freely unloaded before the labor has progressed very far, and for this purpose the employment of an injection of warm water is appropriate. To wait for a cathartic is often out of the question, and the physician who reads this will doubtless appreciate the advice to use the injection, particularly if he has ever attended a case in which the

operation of a cathartic and the termination of labor occurred about the same time.

Nature usually provides for the lubrication of the maternal passages by an abundant secretion of mucus, together with the "waters," and care should be taken that the bag of waters is not broken too early, as a dry birth may be the result.

During the first stage the ordinary diet may be allowed and, at last, such warm drinks as she may desire.

Much harm is often done by advising the woman to "bear down" and make expulsive efforts too early, by which she is only worn out and exhausted without accomplishing advancement. Until the womb has been dilated to admit of the passage of the child no amount of expulsive effort on the part of the mother will avail.

SECOND STAGE OF LABOR

It is wrong to rupture the "bag of waters" until this dilation has been effected, for it acts as a wedge that prepares the passages and advance of the child. It is usually ruptured at the beginning of the second stage and comes away with a gush. If it is ruptured before dilation occurs it will have a tendency to retard the labor. If it is not ruptured spontaneously after the womb is well dilated and the labor well advanced this can be easily done with the finger nail. There is more danger of rupturing it too early than too late, and for this reason interference should be well considered before undertaken. These remarks are intended more particularly for the unprofessional, though we know of some physicians who would do well to consider them. It is presumed, however, that the physician in attendance will know his business and exercise his

judgment, to which bystanders are expected to yield. There are some cases where the labor will proceed to a termination in his absence, and in such cases the full force of this chapter must apply.

As the labor nears its termination the pains are apt to become more protracted and forcible and often more frequent, and are sometimes attended by cramps in the limbs. These latter may usually be relieved by friction. An examination will reveal the presenting part of the child pressing upon the perineum or floor of the pelvis, where it may be felt to advance and recede with each pain, gaining a little each time.

The exertion now reaches its greatest height, the soft parts dilate and yield; one pain follows another in rapid succession, so that one begins almost before its predecessor has terminated, until, with a mighty effort, the head is expelled, after which a short rest may occur, then with one or two more efforts the birth is accomplished.

Nearly all obstetric writers give explicit directions for supporting the perineum during the last few pains, with a view to prevent it from being ruptured. The support should be gentle and not retard the labor, but merely to aid the perineal muscles in directing the head of the child in the axis of the natural outlet without tearing through the tissues. The support must be gentle, even and constant.

Sometimes it happens that when the labor is well advanced the efforts become less powerful and may be suspended altogether, owing to muscular exhaustion. It is then that certain remedial agencies may be called into requirement, and the question for the physician

to determine is whether he shall employ forceps to extract the child or whether he shall make use of means to stimulate uterine contraction and thus effect delivery. It will be very seldom indeed that those who have carried out the advice given in previous chapters of this book will require a practical solution of this question.

When, however, such an emergency shall arise, five to ten grains of the sulphate of quinine will usually be adequate, and more particularly if her muscles are naturally very feeble.

The black cohosh, cimicifuga or macrotys as it is variously called possesses similar qualities, and from ten to twenty drops of the saturated tincture or fluid extract may be given every twenty minutes until the expulsive efforts are resumed. This latter remedy is open to one objection when given in sufficient quantity to produce this effect, and that is that it is liable to cause an unpleasant fullness and pressure in the head.

As soon as the head of the child has made its exit the mother experiences sensible relief and may be assured that the worst is over. The whole body may follow at once, but usually there is a short pause, when, the body turning sideways, it is expelled by another contraction.

If the short interval that occurs between the expulsion of the child's head and the rest of the body is protracted beyond two or three minutes, manual assistance should be rendered. Friction and firm pressure over the womb is to be made, and inserting a finger into the child's arm-pit, slowly extract it. No other course is left. Do not hasten too much lest you favor

hemorrhage. Do not delay too long or you endanger the child.

When the head has made its exit, the nurse or some assistant who has been previously instructed should make gentle pressure upon the uterus with her hands and follow it down as it contracts, and keep up the pressure firmly. When this is properly done it will secure the necessary contraction of the uterus, the afterbirth will be quickly expelled and no trouble from hemorrhage will be liable. When flooding occurs in such cases it is usually because the uterus does not contract and close the blood vessels, consequently the importance of the advice relative to the pressure upon and grasping, as it were, the uterus as the child is being expelled is obvious.

As soon as the head is born it should be immediately ascertained if the cord be wound around its neck or not, and if it is it must be loosened, for if this is not done the child may be strangled. Immediately after the child is born it is to be laid on the right side, its face free and exposed to the air, its mouth examined and freed from any mucus that may have accumulated which will otherwise interfere with respiration.

When there is no trouble about the child a few moments suffice to secure its separation and removal.

THIRD STAGE

If the pressure before mentioned has been properly carried out, the uterus will have contracted and detached the afterbirth and it may be already expelled; but if it has not, and the flooding does not demand attention, the mother may be permitted to rest a few minutes before making any efforts to extract it.

If, after waiting half an hour, there are no after-pains—friction upon the abdomen, grasping the uterus with one hand through the walls of the abdomen and gently kneading it is to be resorted to. Should these means fail it is possible that the afterbirth is adherent (grown fast) and the physician may have to remove it.

When the hemorrhage is too profuse, give ten grains of gallic acid in a tablespoonful of water, or a teaspoonful of fluid extract of ergot, at once. A douche of plain hot water or equal parts of hot water and vinegar will also help in contracting the blood vessels and checking the bleeding.

HOW AND WHEN TO TIE THE CORD

As soon as the child cries—and it is generally sure to find out its abilities to do so very quick—the cord may be severed, and the birth, so far as the child is concerned, is complete. If the cord is free from the neck and cannot be felt to pulsate it should be severed at once, whether the child cries or not. If it does not cry, artificial respiration is to be resorted to immediately as described below. For tying the cord, narrow tape (bobbin), braided silk or other material suitable for a ligature may be used. The cord should be tied in two places—the first ligature being tied tightly around the cord about one inch from the child's body, the second an inch or two further from the child. With a pair of clean, sterile scissors cut the cord between the two ligatures, taking the oft-reiterated precaution to see that no part of the child is cut at the same time.

Several homeopathic writers have advised against tying the cord at all, but severing without, as soon as the pulsation ceases. When the cord is severed, if the child breathes it is to be wrapped in a warm flannel

blanket prepared for its reception and handed to the attendant upon whom the duty devolves of washing, dressing and making it presentable.

If there is any delay in the child's breathing after birth, let the cool air come upon its skin, which is a natural excitant of respiration, or blow in its face or mouth or dash a little cold water on the face or chest, slap it briskly upon the back and buttocks and apply brisk friction all over it. When there is much mucus in the throat remove it by the finger covered with a piece of clean cheese cloth or soft linen. Be careful, however, that it does not become chilled and thus destroy its life. If this does not answer, inflate the lungs by blowing in its mouth and then forcing out the air by pressing the chest, and repeat till it gasps. Grasping it by the ankles and swinging it with the head downward has been recommended as an efficacious plan of restoring suspended animation.

THE PLACENTA OR AFTERBIRTH

This is a very important organ, because through it the developing child receives its nutriment during its life in the womb, and in it the blood of the child mixes with that of the mother to be oxygenated and purified. It is expelled after the birth of the child and should always be carefully examined to see that it has come away intact and unbroken. The placenta looks like a large flat cake, about 7 or 8 inches in diameter, and weighs about 1½ pounds. The outer or maternal surface is rough with furrows and grooves; the internal surface is smooth and has the cord inserted near its center. The edges are continuous with the membranes or bag that held the water in which the child floated during its life in the womb.

THE UMBILICAL CORD

The cord extends from the child's navel to the center of the inner surface of the afterbirth. It is usually as thick as your little finger and about 20 inches long, but may be anywhere from 3 to 70 inches. When very long, the cord is liable to form loops around the baby's neck or limbs. It is often twisted and in a few rare cases knotted.

CLEAN CLOTHES AND CLEAN BED FOR THE NEWLY MADE MOTHER

When the afterbirth has come away, all soiled and blood-stained clothing and bed linen are removed, the mother's body washed thoroughly clean and the genitals bathed in an antiseptic solution (one teaspoonful of lysol to one quart of water). For a wash-rag a piece of cheese cloth previously cleaned by boiling is better than a towel or sponge. When everything has been made absolutely clean and dry, a soft, warm and clean napkin is placed over the genitals, and the binder snugly and evenly arranged and pinned—the safety pins should be about 1½ inches apart and the pinning should be from below upwards. Warm, clean under vest and nightgown are now put on the mother, a draw-sheet under her hips and clean linen on the bed. She may have a glass of milk or a cup of weak tea (not too hot). The room is slightly darkened and if everything be quiet she will likely go to sleep. No visitors should be allowed in the room, and the baby if it cries should be taken to another part of the house. Sleep is nature's great restorer, and the newly-made mother will be greatly refreshed by a few hours' sleep and rest.

WASHING THE NEW BABY

This should be done carefully and systematically. Everything should be got ready before starting to

wash the baby. The room should be warm—about 76° F.—and all doors and windows closed to avoid draughts. A folding screen placed around the nurse's chair adds further protection. The infant should lie in a blanket on the nurse's lap and but one part of the body exposed at a time. The eyes are first attended to. The physician should instill one drop of Crede's solution (2% solution of nitrate of silver) into each eye. A small pad of absorbent cotton soaked in a solution of boracic acid (20 grains of boracic acid to one ounce of distilled water) is used to clean the eyes and wipe away all secretions. The mouth is cleansed with a soft cloth dipped in the same solution and wrapped around the nurse's little finger. The whole face is now washed with plain warm water without soap. To remove the cheesy substance known as the vernix caseosa the rest of the infant's body is greased or rubbed all over with olive oil, sweet oil, white vaseline, cocoa butter or lard freed from salt by a thorough washing in water. Next, the body is washed with water and castile or glycerine soap, care being taken that the soap does not get into the baby's eyes. The scalp, armpits, groins, backs of the knees and ears should receive the closest attention. After the body is thoroughly washed, the baby is dried by gently patting the skin with a very soft towel and then powdered with plain corn starch or a good talcum powder. No unnecessary friction or rubbing should be used, because the baby skin is very tender and easily injured.

The wash rag should consist of a piece of soft linen or cheesecloth that has been previously thoroughly cleaned by boiling. The washrag used in the first washing should be destroyed.

HOW TO DRESS THE CORD

After being thoroughly washed and dried it is dusted with a little powdered boracic acid, wrapped in sterilized gauze or cotton, turned upwards a little to the left and held in place by the binder. The cord usually dries, withers up and drops off about the fifth day, but no force should at any time be used to effect its removal. After the cord has come off, a pad of antiseptic gauze should be placed over the navel and held firmly in place by the binder to prevent hernia (rupture). This should be continued for about one month.

DRESSING THE BABY

The clothing should be loose and easy. The material should be light in texture, warm and unirritating. The binder should be made out of soft flannel cut on the bias and unhemmed. It should be about 6 inches wide and 20 inches long. A flannel undershirt without sleeves and opening in front, a flannel slip, a muslin slip, socks and diaper are all the clothing that is needed. The feet and legs should be kept warm, as cold feet often cause colic. The slips should be fastened with tapes—not with hooks, buttons or pins.

At night the slips are removed and a light flannel nightgown hung from the shoulders put on. The weight and amount of clothing should vary with the temperature and season of the year.

THE FIRST NURSING

After the mother has had a few hours' rest, the baby is put to the breast. There are two good reasons why this should be done. The first one is that by a reflex nervous or sympathetic action suckling at the breast causes the muscles of the womb to firmly contract, and so lessen the danger of flooding. The second reason

is that the mother's breast at this time contains a secretion known as colostrum that it is very desirable for the child to have, as it acts as a laxative and promotes the expulsion of the "meconium"—a tarry substance found in the bowels of a new-born child.

No difficulty is usually experienced in getting the baby to nurse, but sometimes, when the baby is feeble or the nipple small, some tact may be needed. Such babies should be taught to nurse before the milk "comes in" on the third day. The nipple can be moistened with a little milk squeezed from the breast or with sweetened water.

If the nipple is not prominent enough to enable the child to grasp it, it may be drawn out by taking a bottle and filling it with hot water or dipping it in hot water and applying it over the nipple. As it cools, a sufficient degree of suction will occur to draw out the nipple, then apply the child immediately.

On the first day the baby should be nursed every six hours; on the second, every four hours. During these two days more frequent nursings are unnecessary and may be harmful. If the baby cries too much one or two teaspoonfuls of moderately hot water will usually satisfy it. On the third day regular two-hour feedings are started, as described in a later chapter.

ANAESTHETICS DURING LABOR

If anaesthetics may be used to prevent pain in surgical operations the question very naturally arises: Why may they not be equally appropriate for the prevention of pain at childbirth?

Various objections to their employment have been urged, the principal one of which is that when the patient is under the anæsthetic influence the uterine

contractions are suspended and the labor arrested. Theoretically this objection appears plausible enough, but it is not sustained by practice.

Obstetricians who have made this question the subject of special study assure us of the safety of anaesthesia properly managed, and that suspension of uterine contraction under their use is the exception instead of the rule. I have myself repeatedly administered chloroform in parturition, and instead of prolonging the labor I have every reason to believe that it was materially shortened. Under the influence of the drug the irritability of the nervous system was diminished, and those wearing, cutting, irregular and inharmonious pains that so often prevail and cause so much suffering and annoyance were suspended, and instead of expending the energies of the woman the natural pains become more regular and efficacious.

In administering the anæsthetic I endeavor to secure as near as possible, that state of semi-unconsciousness in which the sensation of pain is nearly or quite suspended, without inducing that profound anæsthesia that interrupts all muscular action. A good way to accomplish this is to render the inhalation intermittent, to correspond as near as may be with the occurrence of the pains, renewing the inhalation at the commencement and withholding it during the interval. By this method the objections urged by many against the use of chloroform in parturition are obviated. We do not suspend natural contractions, although we afford the necessary relief without any danger of charging the blood to the extent of endangering the life of the child.

I do not wish to be understood that anæsthetics cannot suspend labor; such a position would be extremely ridiculous, for it is known that anæsthesia may be so profound that all involuntary action may be suspended, the heart and respiration cease and death result; but I do assert that when the anæsthetic is employed to induce partial insensibility that uterine contraction will not be impaired. I am well convinced that the realization of pain will cease under the administration of an anæsthetic before muscular contraction is suspended, and I know from clinical experience that the administration of chloroform or ether may be so managed as to overcome pain and not prolong labor, and that *if all other means were to prove fruitless* WITH THESE AGENTS WE MAY MAKE CHILDBIRTH ABSOLUTELY PAINLESS.

Few, indeed, are the accidents that are known to have occurred from the use of chloroform in childbirth, and the use of anæsthetics in midwifery practice is justly deemed the least dangerous occasion for their employment. Various theories have been advanced to account for this fact, the most plausible of which, to my mind, is that the partial degree of anæsthesia necessary for the purpose cannot be as dangerous as the profound insensibility necessary in surgical operations. There is no need to discuss the other theories in this work. The facts that labor can be rendered painless by such means, even when every other plan has failed, and that the danger is trivial, are of far more consequence to the woman.

I am supported in my belief by the experience and observation of such men as Sir James Y. Simpson, Dr. Tilt, Dr. W. P. Johnston, H. R. Storer, Dr. Beatty

and others, that when there is not some valid reason for withholding it the proper employment of anæsthesia is far less harmful than the suffering that too often occurs at such time.

When the patient is healthy and robust, the suffering inconsiderable and the labor promising to be short, I should certainly refuse to give the anæsthetic, simply because there would be no necessity for its administration; but in a weak and feeble woman, suffering intensely, her pain torturing her to no effect, the suffering endangering exhaustion, I would not hesitate for a moment; I would administer the agent in confident expectation of relieving her agony, preventing prostration, regulating the uterine contractions and shortening the labor.

It is a popular supposition that in feeble, anæmic, nervous and delicate persons the anæsthesia is specially dangerous, but this is a great mistake; *as a rule such persons bear it best.* Organic disease of the heart and lungs constitutes the principal valid objection to the employment of these agents, and even when it exists I am inclined to question whether the danger is not greater without them. Certain it is that anæsthetics *have* been administered to patients suffering from organic diseases of those organs, when important surgical operations have been necessary, with recovery.

The author does not for a moment suppose that any unprofessional person will ever undertake administration of an anæsthetic. The educated physician alone is competent to give it with safety, and he must be provided with a pure article and attentively watch its progress. The patient must be in the recumbent position at the time and the stomach empty or nearly

so, and the drug is to be inhaled along with plenty of atmospheric air.

Curious and critical persons may inquire why this advice is introduced into this work if the directions laid down in preceding chapters are of any practical value. They may say that any preparation is unnecessary when chloroform and ether furnish so reliable and easy an escape from pain.

In reply, I have only to say that I have not written this little work with a view to advocate any particular method of procedure or remedy to the exclusion of others, but to consider such means as are known to myself and the profession by which woman may escape the pains and perils of motherhood. That there may be other effectual means I do not deny, but if such there are I have not learned of them.

Were I to consider one remedy or plan and not others I would greatly diminish the value of this book, and in all probability deprive many anxious readers of the means of amelioration and relief. There are some who can avail themselves of one of the plans described and cannot of the others, while in some the combination of all the means may be necessary. The directions laid down in preceding chapters will in a very large per cent of cases render the administration of anæsthetics unnecessary; but in the cases in which their employment is demanded it is my desire that she know of their value and safety and, by their proper use, we shall succeed if all other means should fail.

I do not make any claim to being the first to advocate anæsthetics in labor or to the discovery that these agents can overcome the pains of childbirth.

It is nothing new to many; but common as it is it is no less a fact that thousands of women suffer without it and will continue to suffer until they are taught to demand relief at the hands of their medical attendants.

CHAPTER XIII

CARE OF MOTHER AFTER DELIVERY

For a longer or shorter time after delivery the mother will continue to require attention, while the care of the child has only just begun. The condition of the mother will necessarily vary, depending very much on the ease with which she has passed the ordeal as well as upon her previous physical condition. Her nervous system will have received a shock of variable intensity and, if the labor has been an easy one or if she is robust and in a good condition to sustain such impression, the shock will be mild and of short duration, and in proportion to the subsidence will be her return to health and comfort.

The agitation caused by the labor will be succeeded by a sense of lassitude and depression, similar to that which occurs after any severe exercise. The circulation will be affected, the countenance will present a dull appearance, and it frequently happens that she will be attacked by a chill that may make her teeth chatter. Under ordinary circumstances this will soon pass off. The circulation will become natural, as manifested by a return of the regularity and fullness of the pulse, the heat of the surface return, the skin moisten, every function become natural and the most perfect, calm and delightful slumber follow.

During this period a watchfulness is to be observed.

If the shock is severe and prolonged, the prostration extreme, respiration slow and sighing or scarcely perceptible, the pulse slow and weak or rapid, small and fluttering, interference will be necessary, and small quantities of stimulants may be given. Ammonia, wine, brandy or whiskey in any palatable form may be given in small quantities and often repeated, and gradually withdrawn as recovery becomes established.

HEMORRHAGE

During this time the possibility of hemorrhage must not be forgotten, for the symptoms already enumerated may be dependent upon loss of blood. Whoever officiates in the capacity of nurse must make frequent examinations of the napkins to ascertain if the discharges are too profuse or if they are wholly arrested.

If the hemorrhage is too free it may be controlled by cinnamon tea, five grain doses of gallic acid in water, or one half teaspoonful of fluid extract of ergot, the doses to be repeated once in from one to four hours as may be necessary. Few will require such interference, and particularly if the directions previously given have been followed. If, however, these means fail, the physician should be notified.

During this time she must be kept quiet, the room slightly darkened and no talking or whispering is to be tolerated. She requires rest, sleep and recuperative repose to restore her energies; but during sleep she is not to be left wholly alone; a competent person should remain with her to observe that nothing goes wrong.

LENGTH OF TIME TO REMAIN IN BED

For the first few days she is to maintain the recumbent position, though she may frequently turn from side to side or even sit up in bed; but nearly all authors are united in advising that she remain in bed until the ninth or tenth day. Women whose muscular tissue is more than usually feeble will do well to remain even longer before any exertion is made that will require muscular effort.

The reason for such advice is that the uterus which has been considerably increased in weight during gestation may have time to resume its proper size before its natural supports will be called upon to retain it in its proper position in the pelvis. By following such directions the mother will materially diminish the liability to uterine displacements.

I am well aware there are those to whom such advice will seem a mockery. Some are compelled to disobey, because upon their daily toil depends their supply of life's necessities; others again, accustomed to the hardships of life, will have developed sufficient muscular power so that recuperation will not be to them the necessity it is to the weaker and more sensitive. In a previous chapter, allusion to these circumstances has been made.

INVOLUTION OF THE WOMB

After delivery, the uterus undergoes a process termed involution by which it resumes its previous size. On the perfection of this process materially depends the mother's future health. Having been increased in weight from sixteen to twenty times or even more it may be readily understood what an arrest of this process of involution implies. If this process is

delayed there will be pain, weight, aching in the back, hysteria and perhaps flooding. The hand over the abdomen can detect the uterus large and tender. There is often inflammation or there may be a lack of muscular and nervous power—atony. When this is the case, flooding is liable. If the mother continues the use of the Mitchella Compound there will be little danger of an arrest of involution.

DIET DURING CONVALESCENCE

During convalescence the diet of the mother is of importance. For the first three or four days a light diet, consisting of oatmeal gruel, tea and toast, light broth and anything of an unstimulating character is to be employed. If, however, the mother is feeble, a more nourishing diet will be necessary from the first, and beef tea, mutton broth, etc., may be given. After the third day the mother may have a nutritious diet, milk, oysters, beef tea, mutton broth, rice, eggs, etc., etc., gradually returning to her customary diet which should be very nutritious.

THE LOCHIA

After delivery, a discharge termed the lochia takes place from the mother's genitals, varying in its duration in different women. In some it may dry up in a few days and in others continue for a month or even longer. Its too early disappearance may be followed by constitutional disturbances, and if not re-established will result in an impairment of the general health, associated perhaps with some disease of the uterus and its appendages. On the other hand, if too long continued or too profuse, it will demand attention on account of causing debility.

The lochial discharge is usually greatest in those who have previously had children, in women who menstruate freely and in those who do not nurse their children.

At first the discharge is composed largely of blood. After a while it changes in character and has the appearance of a secretion. For a few days it is of a red color, but rather thinner and more watery than blood and does not clot; then it becomes yellowish, perhaps greenish, watery, with often the appearance of puriform matter and finally of a soiled water appearance. It is accompanied with a peculiar odor.

CLEANLINESS ABSOLUTELY NECESSARY

This is quite an appropriate place to speak about the need of cleanliness. The value of antiseptics and surgical cleanliness in the treatment of confinement cases is proved every day by the perfect results and uninterrupted recoveries that come when attention is paid to these subjects.

Everything around or near the newly-made mother should be kept spotlessly clean. The clothing and bed linen should be changed at least once a day. Every four hours, or oftener if necessary, for the first three days the genitals should be washed clean with soap and water and an antiseptic solution (one dram of lysol to one quart of clean lukewarm water) allowed to flow over them from a fountain syringe held about two feet above the mother's hips. A bed-pan under the hips will protect the bed. The parts should be thoroughly dried with a clean, sterile towel and a fresh napkin put on. If strict cleanliness is observed there will be no odor to the discharges. Vaginal douches are not at all necessary in a normal case. But if for any

reason the discharge acquire a bad or fetid odor an antiseptic vaginal douche (one dram of lysol in one quart of water) should be given at once with a fountain syringe and repeated two or three times a day until the discharge becomes normal. Douching should always be done gently, so as not to injure the lining membrane of the vagina.

If the lochia becomes too profuse and exhausting it must be modified; a teaspoonful of wine of ergot may be given twice a day to improve the contractile power of the uterus, and some of the elixirs of cinchona and iron may be given two or three times a day for their tonic influence. These elixirs can be found in every well-regulated drug store or may be substituted by one or two grains each of quinine and carbonate of iron at a dose.

AFTER-PAINS

Usually within an hour after delivery, uterine contractions will occur which resemble more or less closely the throes of labor and are termed after-pains. As a rule, following the first delivery they are so slight as to occasion little or no annoyance, but become more and more severe with each succeeding child. Most writers regard them as salutary, being necessary to expel the clots that have formed within the uterine cavity, and thus prevent hemorrhage and to enable the organ to diminish its size.

Prof. Bedford says:

> These pains are what are known as *after-pains*. They are nothing more than the contraction of the uterus ridding itself of the fluids contained within it, and at the same time through these contractions gradually returning, as far as may be, to its pristine state. After-pains, therefore, instead of being regarded

as morbid or pathological, are to be classed among the usual and necessary phenomena of childbirth. In a woman with her first child—a primipara—these pains are ordinarily slight; in a multipara, on the contrary, they are oftentimes severe and harrassing. The reason of the difference is that in the former case the uterus is invested with vigor and tonicity and consequently soon becomes restored to its original condition; while, in the latter its walls are flaccid and the contractions, therefore, more protracted.

Prof. Bedford's words reflect to a great degree the opinions of the medical profession in this respect and furnish us with a practical suggestion, viz.: The more nearly perfect the integrity of the uterus and its associate tissues the less pain there will be after labor.

This suggestion brings us back to a subject already partially considered in a previous chapter in which directions are given for the removal of abnormal uterine conditions and restoration of the muscular tissues to a healthy and vigorous state, by the employment of the squaw vine, blue and black cohosh, all of which in just the right proportions are contained in Dr. Dye's Mitchella Compound. True, our observations then were made with a view to relieve the pains of labor, but they hold equally good with reference to the relief or prevention of after-pains. I can assure the reader that this is not an unfounded hypothesis, but an established fact often demonstrated.

There are those, however, who have not had the advantage of previous preparation and, for the relief of such, it is highly proper to consider the remedial resources at our command. When these pains are protracted by a lax and enfeebled condition of the uterus a small dose of ergot will often promote the contraction and thus diminish their repetition. The remedial influence of the black cohosh or cimicifuga is

similar and may be continued while the after-pains last, in doses of five drops of the fluid extract or homeopathic tincture in water, repeated every three or four hours.

When these remedies are unavailing and the suffering great, it may become necessary to resort to others to diminish sensibility to pain. Ten grains of bromide of potash or five grains of phenacetin every four hours for two or three doses, or a warm drink or a soapsuds enema will often give relief. Should, however, the pains become so severe as to prevent sleep or cause exhaustion an opiate should be given by the physician.

THE BLADDER

It not unfrequently happens after a somewhat severe or tedious labor that the woman will lose control of the bladder and either be unable to discharge the urine at all or perhaps it will constantly dribble away from her as fast as it is formed. In other cases she may have power to pass or retain it, but its passage will be painful and the urethra remain sensitive and tender.

When she is unable to discharge the urine and the bladder is distended and painful, the catheter should be resorted to, and it is a very easy matter to draw off the urine if the operator *knows how*. As no one but a physician would be likely to attempt to pass a catheter no necessity exists here for describing the operation. The woman should make an attempt to pass water in the course of six or eight hours after delivery. The first attempt will quite likely be somewhat painful, and if the urine is hot and burning it may be well to resort to anodyne diuretics, and a teaspoonful of sweet

spirit of nitre may be given in a cup of flaxseed tea. If this does not afford relief it may be repeated and two drops of tincture of belladonna added to the next dose.

Should the woman be unable to pass her urine in from ten to twelve hours, and there is any evidence that there is any urine in the bladder, before making use of the catheter the following expedients may be tried: Place a bed-pan half full of warm water under the hips and apply hot wet cloths, or a warm flaxseed poultice to the lower abdomen; the warmth and moisture will often relax the tissues and the discharge take place.

The influence of the mind upon matter is often illustrated in cases of the kind, as stated by Prof. Bedford in his *Principles and Practice of Obstetrics*. He says:

> I somewhere read years ago of the practice in these cases of pouring within the hearing of the patient water from a vessel slowly into a pitcher; and I can vouch for its efficacy in several cases in which I had recourse to it. * * * * *
>
> It is a curious but interesting circumstance that occasionally after the patient has made vain attempts to relieve herself and the failure of the ordinary remedies, the moment the accoucher suggests the necessity of having recourse to an instrument for the purpose of drawing off the water, madam, alarmed at the idea of an instrument, tells the nurse in an undertone, 'Oh, I think I can relieve myself now.' The nurse brings the bed-pan, and sure enough the bladder is evacuated. Some persons cannot evacuate either bladder or bowels upon a bed-pan, but seated upon an ordinary chamber vessel they find it easy enough, and particularly if it is half filled with hot water.

THE BOWELS

The common practice is to open the bowels on the second or third day. A wineglassful of fluid magnesia

is an excellent laxative for this purpose, but, if preferred, two to four teaspoonfuls of castor oil or one teaspoonful of compound licorice powder or a copious rectal injection of soap and water (to which a few teaspoonfuls of glycerine or castor oil is added) may be given. After the third day the bowels should move daily. If constipated, give ten or fifteen drops of the fluid extract of cascara sagrada in water thrice daily until a regular daily action is brought about.

GAS IN THE BOWELS—TYMPANY

An accumulation of gas in the bowels will give rise to distention and suffering, sometimes amounting to severe distress. Pressure will cause pain which may be mistaken for inflammation. In distention, the swollen abdomen will sound like a drum if gently tapped upon, and pressure though at first painful, will, if gentle and continued, soon give relief, while if inflammation is present the longer the pressure is continued the more painful it will become.

In this trouble, few if any remedies can equal turpentine. Add one half to one teaspoonful of "spirits" of turpentine to an ordinary dose of castor oil and take at a dose. If the taste is offensive it may be given in capsules or syrup of gum arabic. The application of a warm flannel sprinkled with turpentine to the abdomen is also beneficial. A soapsuds enema or one half ounce of the milk of asafœtida injected into the rectum often causes the gas to be expelled and so gives relief. An excellent homeopathic remedy is *bryonia*, of which five drops of the tincture is to be dissolved in one half glass of water and a teaspoonful given every hour. The abdominal binder often adds to the distress and should be removed.

If there be fever along with the distention and pain, the trouble may be due to inflammation (peritonitis), and the physician should therefore be notified at once.

THE BREASTS AND NIPPLES

If the mother has followed out our instructions as to the proper care of the breasts and nipples during pregnancy the chances of her having trouble with them will be very small. But if she has not given the subject any attention, in a few days after the child begins to nurse they will become exquisitely sensitive and painful. An application of the child will be an absolute punishment, and nursing will be a severe struggle between duty and physical suffering. The nipples are liable to become excoriated or cracked and, being constantly in use, are difficult to cure, for every time the child nurses it opens the fissures anew. When the pain becomes so great that the mother can not tolerate the efforts of the child she becomes liable to another affliction. The breasts become engorged, inflammation ensues, an abscess forms and she has a "broken breast."

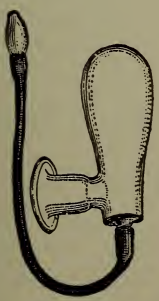


Figure 16

Figure 17

From the day that nursing begins, the nipples should be gently but thoroughly bathed before and after each feeding with a small pad of absorbent cotton soaked with a saturated solution of boracic acid. The breast binder loosely applied prevents sagging of the breasts and often gives comfort and relief. If cracks or fissures appear in but one nipple the child should nurse from the other breast for several feedings, and if the sore-nipple breast becomes overfilled the milk should be drawn from it with a breast pump. (Fig. 16.) When the crack or fissure is small and not very painful a nipple shield (Fig. 17) will give relief and in no way interfere with the use of salves or other remedies. The nipple shield and breast pump should be kept scrupulously clean. Cracks and fissures of the nipple usually heal after a few applications of either one of the following ointments:

(1)	Castor Oil, ...	2 drams
	Subnitrate of Bismuth, . .	2 drams
	Boracic Acid, ...	10 grains

Directions—Spread a little of the ointment on a piece of soft, clean linen and apply to the nipple.

(2)	Compound Tincture of Benzoin,	15 drops
	Vaseline, ...	½ ounce
	Lanolin, ...	½ ounce

Directions—Same as preceding.

If the crack or fissure becomes deep it should be cauterized by the physician.

INFLAMMATION OF BREAST—ABSCESS

A painful, swollen, caked breast is almost invariably the result of poisoning or infection from a cracked or fissured nipple, but may be due to violent rubbing or rough use of the breast pump. The affected part of

the breast becomes painful, hot, tender, swollen and red. Fever, chills, headache, constipation, exhaustion and other symptoms show that the woman is really ill. Should the condition last for more than three days an abscess is to be feared. From the moment that symptoms of inflammation appear, the child should not be allowed to nurse from that breast. Put on a breast binder and apply an ice bag or warm poultices. Open the bowels freely with a dose or two of Epsom salts and take very little liquid, either as drink or food. The breast pump should not be used nor the breast massaged. The following ointment if used before an abscess forms often gives relief:

Powdered Poke Root, . .	1 dram
Camphor, ...	8 grains
Vaseline, ...	1 ounce

Directions—Spread on soft linen and apply to breast.

If an abscess forms it should be opened at once by the physician.

SORE MOUTH OF NURSING MOTHERS

During nursing and sometimes during the latter months of pregnancy the mother may be afflicted by a peculiar species of sore mouth, which may be so severe as to cause great suffering and seriously interfere with the taking of food. This condition is supposed to depend upon some peculiar unhealthy state of the blood, and is oftenest found in those who are suffering from an impaired condition of the general health, among the scrofulous, etc.

The treatment consists in improving the general health. Cinchona, iron and quinine may be taken with a nourishing diet, and the mouth washed with borax and glycerine in water, chlorate of potash or an

infusion of the common gold thread or golden seal. Let them all be of a strength that can be used without causing much pain. I have found the *baptisia* an excellent remedy. I have usually given it in doses of fifteen drops of the tincture three or four times a day. The remedy can usually be obtained at first-class drug stores. It is also called wild indigo, horse-fly weed, etc. The homeopathic remedies most likely to suit are arsenicum, mercurius, nitric acid, etc.

LACK OR FAILURE OF THE BREAST MILK

Breast milk is the natural food of the baby and when it is not secreted in sufficient quantity or of the right quality the infant begins to lose in weight, becomes sleepless, fretful, irritable, colicky and cries most of the time. Every effort should be made to improve the milk. The mother should take a good extract of malt, an abundance of milk, water, chocolate, cereals, gruels and soups. Twice a day the breasts should be bathed in cool water and afterwards thoroughly massaged. Dr. Dye's Mitchella Compound Tabules should be taken according to directions amd pale, anæmic women need a good iron tonic and abundance of fresh air.

TO DRY THE BREASTS

When for any reason it is considered advisable to dry up the milk the following plan should be adopted: Empty the breasts by a breast pump and apply a snugly fitting breast binder. Abstain from water and liquid foods as much as possible and keep the bowels free and open with a daily dose of Epsom or Rochelle salts.

CHILD-BED FEVER—LYING-IN-FEVER—PUERPERAL SEPTICAEMIA—PUERPERAL INFECTION—PUERPERAL SEPSIS

All these terms refer to the same condition—a poisoning of the birth tract that assumes many different

forms varying both in extent and severity. It is a preventable disease and every nurse attending a case of confinement should see that everything around or near the patient is kept spotlessly and surgically clean as advised in another paragraph.

THE SYMPTOMS

These will vary according to the part affected and the intensity of the disease. The usual symptoms are fever, chill, headache, fast pulse, weakness, constipation or diarrhœa; the vaginal discharges acquire a foul odor or stop altogether. Over or near the womb there is tenderness or pain. When peritonitis supervenes the symptoms are more severe.

TREATMENT

Any symptoms of fever in a woman recently confined should at once be reported to the physician. It is of course possible that the fever is due to other causes, but the greatest danger is poison or infection. The sick-room should be quiet and well ventilated. Frequent spongings of the body with cool water will prove refreshing and help to reduce the fever. The bowels should be kept open by a dose or two of Epsom salts, and if tenderness exists near or over the womb turpentine stupes or hot poultices are applied. Abundance of liquid or semi-solid, easily digested food should be given in small quantity frequently repeated. Alcoholic stimulants, saline rectal injections, Crede's ointment and serums will likely be ordered by the physician who will also open any abscess that may form during the progress of the disease.

CHAPTER XIV

THE INFANT AND ITS CARE

THE WEIGHT

The average weight at birth is about seven pounds, and male children are usually heavier than females. During the first three days, or until it begins to nurse, the baby loses four or five ounces in weight, but this is regained by the end of a week. At least once a week the baby should be stripped of all clothing and accurately weighed. An ordinary grocer's scales with a scoop (Fig. 18) will answer splendidly for this purpose.

Figure 18

It is advisable to keep a record of the weight each week, because a steady gain is usually strong evidence that the baby is healthy and thriving. For the first six months there should be a weekly gain of four to eight ounces, and at the end of the fifth month the baby should weigh twice as much as it did at birth; at the end of the first year, three times as much as at birth.

THE LENGTH

The average length of an infant at birth is 19¾ inches—boys a little longer than girls. During the first year the baby grows a little over eight inches.

THE HEAD

The head of a male child at birth is on the average about half an inch greater in circumference than that of a girl and the bones of the skull are generally harder. In women who do not follow the advice given in preceding pages about diet and the use of Dr. Dye's Mitchella Compound these two conditions account for the greater protraction of labor, the frequent necessity for the use of instruments and the greater danger to both mother and child at the birth of a boy baby.

The circumference of the head at birth is 13½ to 14½ inches—nearly half an inch larger than the chest. The head, often misshapen, deformed or elongated as a result of pressure during birth, usually assumes its normal shape by the end of the first month. The two soft triangular spaces are known as the fontanelles. The posterior fontanelle is closed and solid before the end of the second month; the anterior, not until the baby is from fourteen to eighteen months old.

SIGHT

For the first few weeks of life the eyes are very sensitive and should at all times be protected from strong

light. The sleeping room should be slightly darkened and when out for an airing the sunshade or top of the baby carriage or perambulator should be properly adjusted to shade the eyes. When it is about one month old the baby's eyes will follow a light in the room. For several weeks the infant is unable to focus both eyes on an object—this at times causes irregular movements of the eyes that are sometimes mistaken for strabismus (cross-eye). In the sixth month the baby is able to positively distinguish its father and mother from others.

HEARING

For the first day or two the baby is deaf. The ability to hear comes about the fourth day and the hearing steadily improves so that by the fifth or sixth week the baby is disturbed by loud talking or unusual noises, and before the end of the third month will turn its head in the direction from which the sound comes.

HOLDING UP THE HEAD

By the fourth month the baby as a rule is able to hold its head upright without assistance.

CRAWLING—SITTING—STANDING—WALKING

In the fifth month the baby is able to crawl on all fours; in the seventh month to sit up alone; in the ninth or tenth month the first attempts are made to stand alone, and in the twelfth or thirteenth to walk. The baby should not be allowed to walk unsupported too early in life.

SPEECH

Girls begin to talk earlier in life than boys. When it is about one year old the average child is able to say "papa" and "mamma", and by the end of the second

year begins to form sentences of two or three simple words.

BATHING THE BABY

A daily full tub bath should not be given until the cord has dried and fallen off and the navel thoroughly healed. The best time for the bath is in the morning, about one hour after the baby has been nursed or fed. The room should be warm and free from drafts, and before the bath is started everything likely to be needed is so placed as to be within easy reach. The tub should contain just enough water to cover the baby's body. For the first week or ten days the temperature of the water as ascertained by the bath thermometer (Fig. 13) should be 99° to 100° F.; this should be gradually reduced so that at the end of the first month it is 95° F., and after the sixth month 90° F. First wet the baby's head and then gently lower or immerse its body into the water—the head and back being well supported by the nurse's left hand, the body washed with her right. After the bath, which should not last longer than four or five minutes the baby is taken out, wrapped in a soft warm towel on the nurse's knee and its body thoroughly dried by gently rubbing or patting the towel. The groins, armpits and buttocks should be well powdered with corn starch or a good talcum powder, but when the skin is chafed or sore, stearate of zinc powder or oxide of zinc salve is to be preferred. Do not use a sponge in bathing the baby—a wash cloth of soft muslin or cheesecloth is much easier to keep clean and on that account is preferable.

SLEEP

In infancy there is a necessity for considerable sleep, and when the sleep is calm and natural it should be

continued without interruption for considerable time. A young child will be apt to sleep between each feeding, and it is a question of importance to decide whether the child should be waked up to nurse. I would advise that it be done, so that there may be as great regularity about sleeping and eating as possible, and if this plan is carried out the trouble will be materially reduced. Usually for the first month or two the child will pass two thirds to three-fourths of the twenty-four hours in sleep. From the second to the sixth month it will naturally sleep twelve hours at night, waking two or three times to nurse, and taking two or three naps during the day.

It should not be expected to sleep too much, for as it becomes old enough to notice objects it will amuse itself with playthings and not sleep so much. Until a child is two years old it will require a nap in the forenoon and one in the afternoon. As it grows older it will sleep less. By a wise provision of nature the amount of sleep in health will usually regulate itself, though the mother may take advantage of it and divide the sleep during the day into regular intervals for her own convenience and the welfare of the child.

Do not bury it beneath a mass of heavy bedclothes nor cover it so lightly that it will be chilled. Maintain as nearly as possible an even temperature. The room should be moderately darkened while sleeping. There should be plenty of pure air, but care is to be taken that it is not left to sleep where a current of air may blow upon it. Do not cover its face with the bedclothes. Give it plenty of room. A crib is better than to have it sleep in the bed with the mother. Its bedding should

be freely and frequently aired and kept free from all unhealthy odors.

THE ABDOMINAL BAND OR BINDER

For four or five months the baby should wear an abdominal binder or belly band, made of soft white flannel six or eight inches wide and long enough to encircle its body two or three times. When the flannel binder is discarded a knitted band with shoulder straps should be substituted. The object of the binder is at first to hold the dressings of the cord in place; later on, by supporting the abdomen, it helps to prevent rupture when the baby cries or strains. To hold it in place tying with strings or tapes attached to one end of the binder will be found better than pinning or sewing. The binder should be put on evenly and smoothly, but not too tightly, as that would do harm by preventing the movement of gas or wind in the bowel.

THE EYES

Because they are so sensitive every precaution should be taken to prevent the oil, soap or water used in sponging or bathing from getting into the baby's eyes. Cleanliness of the eyes is necessary at all times and, every morning at the time of bathing, the outside of the eyes should be washed with a small pad of absorbent cotton soaked in a solution of boracic acid.

INFLAMMATION OF THE EYES—OPHTHALMIA NEONATORUM

Three or four days after birth, infants are often attacked by a peculiar species of inflammation of the eyes which should receive immediate attention, for delay here is especially dangerous and may result in destruction of sight, while if promptly and properly treated it will generally yield with little trouble. When

due to cold, exposure to bright light or soap getting into the eyes it is not nearly so dangerous as when caused by infectious discharges of the mother getting into them during birth. In the severe cases the eyes become red, the eyelids swollen and even closed, and there is a profuse discharge of pus. A physician should be called at once—not a moment wasted. Until his arrival, cold compresses should be applied to the eyes every few minutes and the secretion frequently washed away with a pad of absorbent cotton wet with saturated solution of boracic acid. If for any reason the physician's visit is delayed the following should be used:

20% Solution Argysol, . . 1 ounce

Directions—Wipe away all secretion; separate the lids and instil a few drops in the eye with a medicine dropper.

THE BOWELS

Among the first things likely to demand attention is the evacuation of the child's bowels. Usually the secretion in the mother's breasts will be sufficient, and we may wait for twenty-four hours without interfering. If at the expiration of this time the bowels have not moved, give a tablespoonful of a moderately strong tea of elder flowers sweetened with molasses. Repeat every two or three hours until the object is accomplished. A small dose of castor oil is often given, with good results. The best way to give the castor oil is to drop it into the baby's mouth from a medicine dropper (Fig. 15).

THE BLADDER AND KIDNEYS

Usually the kidneys perform their functions naturally at birth, and if the child does not pass its water within ten or twelve hours there will be more apt to be some

obstruction to the flow than a lack of secretion. Observe carefully that it has not urinated. If the urine is retained and the bladder full it may be felt as a round, circumscribed tumor in the lower part of the abdomen. If such be the case a physician is to be called at once, who will introduce a catheter or bougie for the child's relief, unless some other expedient he may suggest avails. If there is no urine secreted, then a few drops of sweet spirits of nitre in water may be given. Before resorting to medicine, a correct diagnosis should be made, for if the bladder is full and nitre is given it may increase the trouble.

THE DIAPERS

The napkin or diaper should be made of soft, thick absorbent material and when put on the infant should be warm and dry—a wet diaper causes the skin to become red and sore. Soiled napkins should be placed in a covered receptacle and as soon as possible boiled in plain water, washed thoroughly clean and afterwards rinsed free of all soap, alkali or washing powder—such things are irritating to the delicate baby skin and often cause chafing or even eczema of the buttocks. A diaper wet with urine should not be used again until it has been washed and dried.

SOME GOOD ADVICE

Almost simultaneously with birth does feeding and physicing begin. So extensive is the practice that a baby may consider itself extremely fortunate if it escapes a *whole hour* after it is born without having to take something, and from that time forward there is always a teaspoonful of some food or drug waiting for it. If ever it ventures to test its lungs or voice it must be considered either sick or starving, and down goes

the favorite "dope." Indeed, they sometimes live in the world a whole day without getting their little mouths empty enough to enter an objection to the way business is done, by a cry. Ludicrous as such remarks seem, they are nevertheless *too* near the truth, for, from the baby's arrival it is expected to freely partake of "pap," "sling," castor oil, paregoric, soothing syrup, etc., etc., or else it must eat every time it wakes up, if indeed it is not awakened to feed it.

I sincerely hope that those who read these pages will remember that the baby is not always sick nor hungry when it cries a little. More babies die from over than under feeding. Nothing can be farther from my wish than to neglect these little strangers, but when we realize the growing tendency to keep them half stupid with opiates in the form of powder, paregoric, soothing syrup, baby syrup and the like, we are sure our language is not half strong enough. There are times when opiates are needed, but to stultify a child's intellect and depreciate its vitality by narcotizing is an abomination.

VOMITING

Vomiting must not always be regarded as an evidence of disease, for many healthy children vomit. Indeed, it must be regarded as a wise provision of nature for the disposal of an excess of food. When this is the case, care should be exercised to diminish the quantity of food taken. Vomiting may, however, be caused by an unhealthy condition of the milk; it is also the result of irritation of the stomach, and when due to this latter cause the child soon becomes pale, feeble, distressed looking and loses its appetite.

The remedies mostly to be depended upon in these conditions are to be derived from the homeopathic school, and are aconite, arsenicum, ipecac, nux vomica and pulsatilla. A drop of the tincture of either may be put into a glass half full of water, of which a teaspoonful is to be given every three or four hours. Preparations of pepsin are much employed for the purpose, and for an infant of a few months one grain of pepsin and one fourth grain of subnitrate of bismuth may be given every three or four hours with advantage, thus:

Pepsin, ...	4 grains
Subnitrate of Bismuth, . .	1 grain

Make four doses. One every three hours.

Should the vomited matter contain blood or bile, the physician should be notified.

Vomiting very soon after feeding is often a sign that the baby gets the milk too fast on account of the hole in the rubber nipple being too large. The same symptom may result from tight bands or rough handling after feeding. With a suitable nipple, loose clothing and rest after taking food the vomiting will not occur.

In bottle-fed babies who throw up or spit up sour milk many times a day the trouble is usually overcome by lessening the amount of cream in the food.

INDIGESTION

This is a very frequent disturbance in infancy, and is usually due to improper feeding—irregular, too much or too fast. In bottle-fed babies unsuitable food is usually the cause.

Vomiting after feeding is as a rule the first symptom, but if the stomach trouble persists, the baby becomes restless and feverish, cries after being fed or nursed, and suffers from colic, rumbling of gas in the

bowels, and diarrhœa. The stools are often green, foamy or curdy, and frequently so acrid that they cause the skin around the anus to become red and sore.

When symptoms of indigestion appear, the baby should not be nursed or fed for twelve to twenty-four hours. Give the baby a dose of castor oil to clean out the stomach and bowel. Barley, rice or albumen water may be given every three or four hours. When nursing is resumed, the feeding should for a few times be shorter than usual, and one half a teaspoonful of lime water in the same amount of water may be given to the child before it is put to the breast. Caking of the mother's breast should be prevented by using the breast pump regularly every three hours. All symptoms of indigestion usually quickly disappear after the feeding is properly regulated.

COLIC

This is a very common ailment in both breast and bottle-fed babies. It is caused by painful contractions of a part of the bowel muscles, and always indicates some disturbance in the intestine resulting from irregular or improper feeding. The symptoms of colic are sharp cries, drawing up of the feet, hard and rigid abdomen and sometimes rumbling of gas in the bowels. When the gas is expelled by the rectum the pain ceases, the child is quiet and usually falls asleep. At times there is diarrhœa with green or curdy stools.

TREATMENT

In a baby suffering from an attack of colic, care should be taken that the abdomen and feet are well warmed by dry, hot flannels or a hot water bag. An injection into the bowel of four ounces of lukewarm water to which half a teaspoonful of glycerine is added

usually expels the gas and gives relief. A drink of a few teaspoonfuls of hot water containing a few drops of essence of peppermint is often very helpful. When due to flatulence, a little camphor sling, tea of fennel seed, sweet flag, celery, chamomile, etc., may be used. I have, however, found colocynth one of the grand remedies for infantile colic. It may be given as prepared and found in the homeopathic medicine cases, or thus:

Tincture of Colocynth, . .	2 drops
Water, ...	½ ounces

Dose—A teaspoonful every hour.

One dose will usually suffice, and by repeating it once in four or five hours the tendency to colic is often broken up.

Paregoric and whiskey should never be given to colicky babies.

Between the attacks the feeding should be regulated and treatment given for the indigestion upon which the colic depends.

THRUSH

This is a disease of the mouth and is also known as aphthæ or canker. It is most common among pale, delicate or unhealthy children, and those brought up by hand (bottle-fed babies), or those whose hygienic surroundings are defective. It is largely due to faulty nutrition, indigestion, improper food or lack of cleanliness of the mouth, feeding bottle or rubber nipple.

The symptoms consist in the appearance of small white specks or patches in the corners and lining of the mouth and upon the tongue, resembling bits of curdled milk, which are disposed to spread and multiply, extending down the throat to the stomach and in some cases the whole length of the intestinal tract.

The mouth becomes hot and painful, the lips swollen, the saliva dribbling away. The child is feverish and restless, grasps the breast in its mouth and immediately lets go again on account of the pain it causes, is fretful, cries with pain and gives other signs of suffering. The pulse is quick and feeble, vomiting and colic may occur or a diarrhœa develop that will cause more or less emaciation or wasting.

TREATMENT.—In the outset we must endeavor to prevent the extension of the disease, give attention to the surroundings, endeavor to obtain pure air and water or if convenient a change of climate. If nursing, see that the nipple is washed before and after nursing with boracic acid solution and that the mother's milk is wholesome; if not, seek to improve her condition or else wean the child, secure a wet nurse or adopt artificial feeding. If brought up on cow's milk, see that the milk is sweet and good and obtained from a healthy herd. The nursing bottles and rubber nipples should be kept scrupulously clean as advised on page 207.

In older children a change of food often accomplishes great results. Avoid acids, sweets and fats. A little beef tea, mutton or chicken broth, soft boiled rice, oatmeal gruel, pasteurized milk, etc., varied a little are better in these cases than persistent feeding with milk.

When the mouth is dry and the child feverish and thirsty, do not forget to give it a little cold water; it is as grateful in small quantities to the child as to an adult.

To overcome the acidity and regulate the bowels give small doses of the neutralizing mixture (page 412) and if the diarrhœa is exhausting, add three to five

drops of the fluid extract of cranesbill to each dose. Alternate with:

Fowler's Solution,	5 drops
Fluid Extract Baptisia,	15 drops
Water,	4 ounces

Dose—A teaspoonful every four hours, two hours from the doses of the neutralizing mixture when the symptoms require the use of that also.

If indigestion predominates, give a grain or two of pepsin and one half a grain of subnitrate of bismuth after or immediately before each feeding.

For local application in the mouth, many old fashioned remedies have had a time-honored reputation, as an infusion of goldthread, sage and honey, borax and honey, alum and honey, etc. One part of peroxide of hydrogen in eight parts of water is an excellent mouth wash.

The following answers a good purpose, and if in using it a little is swallowed it is beneficial rather than otherwise:

Boracic Acid,	20 grains
Fluid Hydrastis,	½ dram
Glycerine,	1 dram
Water,	2 ounces

Apply with a soft brush, touching the sores several times a day, or put one fourth to one half a teaspoonful into the mouth three or four times a day.

A change to the following, after using one vial of the above, is often advisable:

Borax,	24 grains
Honey,	3 drams
Distilled Water,	3 ounces

Directions—Apply on a swab or use as mouth wash every four hours.

The disease is often met with in older children or adults. Then the same remedies increased in dose or strength will be equally appropriate.

JAUNDICE

In many infants a yellowish discoloration of the skin appears in the first week of life. Usually it is a very mild affection and rarely lasts longer than a week. Occasionally, however, it assumes a more severe type, the skin and whites of the eyes become yellow; the stools, clay-colored; the child drowsy, with griping pains; the urine scanty and staining the diapers yellow.

No medicines are needed in the average case, but if regulation of the feeding, and flushing of the lower bowel with a soapsuds or saline enema do not cause an early disappearance of the jaundice, a physician should be called to prescribe for the baby.

ROCKING THE BABY

There is another reprehensible custom which, though perhaps not exactly a moral consideration, is not wholly inappropriate here, and that is rocking or jolting the child every time it frets. Children can be taught to go to sleep just as well without rocking as with, and were I to bring up a score of children none of them should be rocked. True, it often quiets them and induces sleep, but it does so by causing an abnormal condition of the brain and nervous system. Let grown persons try cradle rocking or swinging and see how they will like it. If motion is to be employed, a carriage is far preferable.

Frequently, when the child is crying from colic and its little abdomen is distended with wind, or when there may be determination of blood to the head, the head hot, feverish and, if the child could speak, it

would add, painful, it is taken upon the knee and jolted, jounced and trotted, and the harder it cries the more vigorous the process until it falls into an uneasy sleep. I always feel as if I want to horsewhip a mother or nurse who treats the suffering child in that way. Were they to try the same process when suffering similarly to the child they would ransack the vocabulary for words expressive of condemnation. Often when attending children suffering with disease of the brain I have more trouble to protect them from swinging and jolting than anything else—motions that are not only excruciatingly painful, but absolutely injurious.

THE WET NURSE

In the selection of a wet nurse, obtain one as near as possible the age of the mother and whose child is not much older than the child she is also to nourish. It is needless to say she must be free from disease and her breasts and nipples well developed. A wet nurse should have the same class of food and exercise as that to which she was accustomed. Even when the mother herself undertakes to nurse the child, if she becomes extremely emaciated or attacked by any disease it is best that she transfer her charge to the breast of a hired nurse.

BABY NEEDS WATER TO DRINK

Give the baby a drink of water, often. Many mothers never think of this, and the little things suffer intolerably from thirst which milk does not quench. This causes babies to nurse when they do not need it. Offer it to the child frequently whether it nurses or not. Don't be afraid of water and don't adulterate it. Pure, clear cold water is as grateful to an infant as an adult, and will contribute to its health and good nature.

FRESH AIR AND SUNSHINE

These are just as necessary for a baby as for an adult. In the warm, clear days of summer a baby may be taken outdoors for the first time when it is about two weeks old. In the fall, winter or spring it is advisable to wait until the baby is three months old before taking it out even on a pleasant day. It will, however, be benefited by a half hour's airing in the nursery or other room with the windows partly or wide open, according to the temperature. From 10 A. M. to 3 P. M. is the best time of day for the outdoor airing. In cold weather the infant should have additional clothing, and chilling prevented by placing hot water bottles covered with flannel in the baby carriage or perambulator. When out for its daily airing the baby's face should be covered with a veil, and the top or sunshade of the carriage so arranged that the sun cannot shine directly into its eyes. If well protected from cold, wind or sun the baby will derive a world of benefit from sleeping outdoors for a few hours each day.

TEETHING—DENTITION

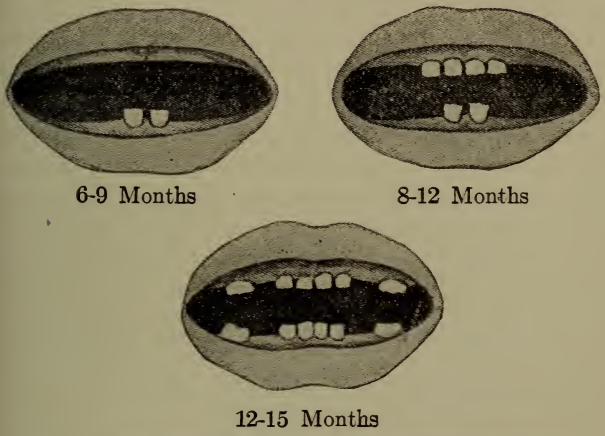
The first teeth, twenty in number, are known as the milk, temporary or deciduous teeth, and although there may be a great variation both as to the order and time of their first appearance the following table may be taken as an average:

Two lower incisors, (lower front teeth) . .	6— 9 months
Four upper incisors, (upper front teeth) . .	8—12 months
Two lower lateral incisors and four front molars, (double teeth) .	12—15 months

Four canine teeth, (eye-teeth and stomach teeth) . . .	18—24 months
Four posterior molars, (back double teeth) . .	24—30 months

When one year old a child should have 6 teeth; at 1½ years, 12 teeth; at 2 years, 16 teeth; at 2½ years, 20 teeth.

Figure 19



6-9 Months

8-12 Months

12-15 Months

18-24 Months

24-30 Months

Any prolonged illness or rickets may be the cause of the teeth coming later than normal.

Children born with teeth are by no means rare, and when such teeth interfere with nursing they should be extracted.

Some babies cut their teeth without the slightest trouble, but as a rule, just when the tooth is coming through, the gum becomes painful, hot, red and swollen, the baby drools at the mouth and for a day or two is slightly feverish, restless, fretful and sleepless.

The process of teething is very often accompanied by derangement of the bowels, and we are to be careful how we abruptly check a diarrhœa at the time, lest we cause an irritation of the brain and nervous system of far more serious tendencies than the diarrhœa. Frequently bathing the mouth of the child, cooling drinks, etc., will be beneficial, and at the same time, if there is diarrhœa, lime water should be added to the milk. If the diarrhœa becomes too profuse, employ the remedies as directed under diarrhœa. If there are symptoms of disturbance of the brain, control with gelseminum. This will be better than opiates, thus:

Tincture of Gelseminum, . .	2 drops
Water, ...	2 ounces

Dose—A teaspoonful every one or two hours.

If there is fever, add aconite to it, thus:

Tincture of Gelseminum, . .	2 drops
Tincture Aconite, ...	2 drops
Water, ...	2 ounces

Dose—One teaspoonful every one or two hours.

The child should have something to bite on at the same time to aid in bringing the teeth through. I have found such a course satisfactory in nearly all cases.

The milk teeth frequently require attention, and the child should at regular intervals be taken to a dentist. He is often able to repair the teeth and prevent disfigurement.

The permanent set of thirty-two teeth arrives as follows:

First molars, . .	6 years
Incisors, ...	7- 8 years
Bicuspids, . . .	9-10 years
Canines, ...	12-14 years
Second molars, . .	12-15 years
Third molars, (wisdom teeth)	17-25 years

WEANING

It is often a question of considerable importance when to wean the little one. Nothing is gained by nursing too long when no circumstance demands it, and on the other hand there may be danger in weaning it too early. As a rule, it should be started at nine or ten months and completed at one year. Begin by giving one feeding each day from a bottle; later, two, and so on gradually until the baby no longer requires to be nursed. The change should be gradual rather than abrupt. Should the mother become pregnant again during nursing it will be best that weaning take place at once. When menstruation returns during lactation, the milk is often altered in character, but unless the child is affected and begins to suffer from indigestion, colic, diarrhœa or loss of weight it should not be weaned.

The season for weaning is important. During the hot weather, intestinal disorders are most prevalent, and any digestive irregularity it is known will generally give rise to diarrhœa and other disorders of a similar nature, and unless some circumstance renders it imperatively necessary it is not best to wean during hot weather nor just preceding it. The mother should arrange to wean early in spring, so that the child may become accustomed to different food before the hot

months, or she should defer weaning until those months during which there is the greatest infant mortality have passed. To wean infants in a city in hot weather is fatal in a very large per cent of cases. Cow's milk in the cities in summer is always a question of serious investigation, and no matter how carefully managed, it is certain if the milk is all right when it leaves the dairy, by the time the infant gets it, it will have been influenced to some extent. The country is certainly the place for babies in the summer.

NURSERY DISCIPLINE

As a rule, children are more intelligent and observing than supposed, and they quickly form habits that are not easily broken. They seldom thrive well when peevish or fretful, while good-natured children are most generally healthy. Their dispositions are naturally cheerful and joyous, unless sickly, neglected or mismanaged. The following remarks are well worthy the attention of mothers:

> The entire system of nursery discipline, too, has a direct tendency to call into action at an early age the passions of the child, rather than to still them or direct them in their appropriate channels. At one time it is dandled and coaxed in order to quiet it; at another it is scolded and beaten for the same purpose. We either do what it desires or compel it to do what we like. We comply with its whims or make it submit to ours.
>
> Thus no medium is observed, and the child is doomed to be always giving orders or receiving them. Accordingly, the first ideas it forms are those of dominion or slavery; before it can speak it commands; before it acts it obeys; and sometimes it is corrected before it is conscious of faults or even before it is capable of committing any. We thus implant in its tender mind those passions which are afterwards unjustly attributed to *nature:* and having taken pains to render it depraved we complain because we find it so.

But a peevish and fretful disposition in infancy sometimes arises from too close confinement in stagnant and impure atmospheres, impairing the energies of the system, impeding digestion and subjecting the sentient organs to impressions if not positively painful at least uncomfortable. The remedy consists in removing the cause. All attempts to prevent or soothe the fretfulness of an infant by cakes, sweetmeats and confectionery should be prohibited. The child soon acquires a morbid appetite for such things, which is ruinous to its health, and it soon learns to cry and fret in order to obtain them; nor should children when they happen to fall or experience disappointment of any kind be soothed by expressions of extreme pity and sorrow, and be allowed in order to hush its cries some foolish indulgence. Nothing tends more certainly to encourage a fretful, complaining and exciting disposition or to induce violent and long-continued paroxysms of crying for the most trifling causes.

Fear, of the most intense description, causing immediate injury to health and often producing a lamentable degree of feebleness of character in after life is not unfrequently excited and cherished in children by the reprehensible conduct of parents and nurses in attempting to render them quiet, or enforce their obedience to commands given them by threatening with a visit from some object of terror. As we are liable to be ruled often by the influence of incidents and impressions subject to revival by associations, when the causes which first produced them are remembered no longer, how studious, therefore, ought those who have the care of children to be, that no impressions be made on their minds which should bias their affections, mislead their judgments or render nugatory their best resolves, to the end of their lives. We ought to be careful before punishing a child for obstinacy that its fault really arises from its own wilfulness and not from childishness or inability to do what you bid it. Inadvertency, forgetfulness, unsteadiness and wandering of thought are the natural faults of childhood and, therefore, unless observed to be wilful are to be mentioned softly and gained upon by time. Children, if properly trained from their birth, are far more docile than the generality of parents are inclined to believe; and at a very early age can distinguish between what is reasonable and unjust in our behavior toward them. They should,

therefore, be treated as rational creatures, and be made sensible by the mildness of our carriage and by the composure even in our correcting them that what is done is reasonable in us and useful and necessary for them; and that it is not out of caprice, passion or fancy that they are commanded or forbidden anything.

Anger is the most readily excited passion in childhood. Its immediate efforts are in the highest degree prejudicial to health, by determining to the head an undue amount of blood. It is very often the result of having frequently witnessed the exhibition of violent passions in those who surround it. Crying, screaming and various gesticulations of the limbs and body are the means by which the passions of anger and other violent emotions are generally expressed in infancy.

Sometimes, when a child begins to cry, to pacify it a stick is offered it to beat the "naughty stool" or "stove" that made it stumble; with this the child may be quieted, but thence it instinctively acquires the disposition to revenge itself on whatever gives it uneasiness or inconvenience, whether things or persons; and thus the desire for revenge is so deeply implanted in the mind as scarcely ever after to be entirely eradicated. Parents often truly wish their children to do well, but by their own example implant in their offspring the seeds of many a vice.

CHAPTER XV

FEEDING THE BABY

The experience of ages and the dictates of common sense all unite in declaring that the most natural food for a new-born infant is its mother's milk, provided she be in a proper state of health. Every mother should nurse her baby, unless there are strong and sufficient reasons why she should not do so. The child should not be nursed by a mother suffering from tuberculosis, Bright's disease, advanced heart disease, epilepsy, insanity, diabetes, pneumonia, typhoid fever, abscess of the breast, erysipelas, scarlet fever or other contagious or severe disease.

If for any reason the mother cannot or will not nurse her child the best substitute is a wet nurse(see page 193). When a proper nurse cannot be secured, recourse must be had to either mixed or artificial feeding.

Mixed feeding is the giving of an artificial food from a bottle in addition to nursing from the breast, and is often advisable when the breast milk is insufficient or when given at night to allow longer rest for the mother. It is a good plan to have the baby from the very outset take one or two feedings each day from a bottle. In case of severe illness of the mother and at weaning

time it then becomes a much easier matter to change to entire bottle feeding.

As a substitute for the mother's nurse, cow's milk modified or altered according to fixed rules is recognized as the best for general use.

BREAST-NURSING

The child should be taught the habit of seeking the breast at regular intervals. This is easily done, if undertaken at the commencement. We are more or less creatures of habit, and it is much easier to form a habit than to break one. Babies learn quickly and unlearn with difficulty.

On the first day, after the mother has had several hours' rest and sleep, the infant should be nursed every six hours; on the second day, every four hours. From the third day to the end of the first month the nursings should be every two hours from 7 A. M. to 9 P. M., with two night nursings at 12 and 4 A. M. From the first month until baby is a year old, the intervals between the nursings should be the same as those mentioned under artificial feeding (page 205.)

Each nursing should last about twenty minutes, and if the milk is abundant the breasts should be nursed alternately, otherwise, both breasts should be used. The infant should not be allowed to fall asleep with the nipple in its mouth, but as soon as it has finished nursing should be placed in its crib or separate bed and allowed to sleep.

A good color, sound sleep, steady gain in weight and normal stools are the best evidences that the milk or nurse is agreeing with the baby. When, notwithstanding regular and proper feeding, it fails to increase in weight, is colicky and suffers from diarrhœa with green,

curdy stools, the question of weaning, and raising it on artificial food must be carefully and thoughtfully considered.

ARTIFICIAL FEEDING

The composition of cow's milk is so different from that of mother's milk that it must be modified or altered by changing the proportions of its various ingredients so that it will closely resemble mother's milk and become suitable for baby's digestion. The exact proportions of the different ingredients of modified milk must necessarily vary according to the age, weight and physical condition of the baby, and the following formulæ, as advised by Dr. Holt, are given to act as a guide to the mother:

Formula I (third to fourteenth day).

INGREDIENTS.	QUANTITY OF EACH REQUIRED TO MAKE			
	12 oz.	16 oz.	20 oz.	24 oz.
Milk.....(ounces)	1	1¼	1½	2
Cream.....(ounces)	1	1¼	1½	2
Limewater.....(ounces)	¾	1	1½	1½
Water.....(ounces)	9¼	12½	15½	18½
Milk sugar (even tablespoonfuls)	1½	2	2½	3

Formula II (second to sixth week).

INGREDIENTS	QUANTITY OF EACH REQUIRED TO MAKE			
	20 oz.	24 oz.	28 oz.	32 oz.
Milk.....(ounces)	2	2½	3	3¼
Cream.....(ounces)	2	2½	3	3¼
Limewater.....(ounces)	1½	1½	1½	2
Water.....(ounces)	14½	17½	20½	23½
Milk sugar (even tablespoonfuls)	2½	3	3½	4

Formula III (sixth to eleventh week).

Ingredients	Quantity of each required to make			
	24 oz.	28 oz.	32 oz.	36 oz.
Milk (ounces)	3	3½	4	4½
Cream (ounces)	3	3½	4	4½
Limewater (ounces)	1½	1½	1½	1½
Water (ounces)	16½	19½	22½	25½
Milk sugar (even tablespoonfuls)	3	3½	4	4½

Formula IV (tenth week to fifth month).

Ingredients	Quantity of each required to make		
	28 oz.	35 oz.	42 oz.
Milk (ounces)	8	10	12
Cream (ounces)	3½	4	5
Limewater (ounces)	1½	1½	2
Water (ounces)	15	19½	23
Milk sugar (even tablespoonfuls	3½	4½	5½

Formula V (five to ten months).

Ingredients	Quantity of each required to make			
	30 oz.	36 oz.	42 oz.	48 oz.
Milk (ounces)	11¼	13½	15¾	18
Cream (ounces)	3¾	4½	5¼	6
Limewater (ounces)	1½	1½	2	2
Water (ounces)	13½	16½	19	22
Milk sugar (even tablespoonfuls)	4	4½	5½	6½

Directions for preparing any of the above formulae:

Disolve the sugar in boiling water, and filter if necessary. Add the milk, cream and limewater, and mix the whole in a pitcher.

A sufficient quantity of food to last 24 hours should be prepared at one time. This quantity is divided into the number of feedings required for the day; each

feeding being put in a separate bottle and the bottle stoppered with absorbent cotton. The bottles should then be cooled rapidly, by standing first in tepid, then in cold water, and afterwards placed in an ice chest. If the milk is to be sterilized or pasteurized this should precede the cooling.

When needed for feeding, the bottle should be taken from the ice chest and warmed by standing in warm water which is deep enough to cover the milk in the bottle; it should then be thoroughly shaken and the nipple put on. The temperature of the milk for feeding should be about 100° F.—a few drops poured upon the front of the wrist should feel warm, but not hot. A knitted bag placed over the bottle will keep the milk warm whilst the baby is feeding. The infant should lie in the nurse's or mother's arms while taking its bottle, and each feeding should last about twenty minutes. If fed while in its crib (as it may be after the third month) the bottle should be held by the nurse.

Bottle-fed babies must be fed regularly as to time and quantity, and the following table will prove an excellent guide to follow:

Age	Intervals between day Feedings	Number of Feedings at Night from 10 P. M. to 7 A.M.	Number of Feedings in 24 hrs.	Quantity for one Feeding	Quant'y in 24 hrs.
1st week.....	2 hrs.	2	10	1 –1½ ozs.	10–15 ozs
2d and 3d weeks...	2 "	2	10	1½–3½ "	15–35 "
4th and 5th weeks.	2 "	1	10	2½–3½ "	25–35 "
6th week to 3d mo'th	2½"	1	8	3 –5 "	24–40 "
3d to 5th month...	3 "	1	7	4 –6 "	28–42 "
5th to 9th month...	3 "	0	6	5 –7½ "	30–45 "
9th to 12th month..	4 "	0	5	7 –9 "	35–45 "

The exact quantity for each feeding will vary slightly in different children, and must be determined by carefully watching the effect upon the child's health—the color, the gain in weight and condition of the stomach and bowels.

Because the milk of one cow is so likely to change in quality from day to day, it is better to use mixed or herd milk, provided it is fresh and the cows are clean and healthy.

Certified milk is simply clean milk obtained from healthy, well cared for cows, properly fed and well stabled. The milk is placed in clean, sterile cans and kept at a temperature of 40° F. until it reaches the consumer.

Fresh, pure, clean milk is essential for baby's welfare, and when there is reason to believe that the milk

Figure 20

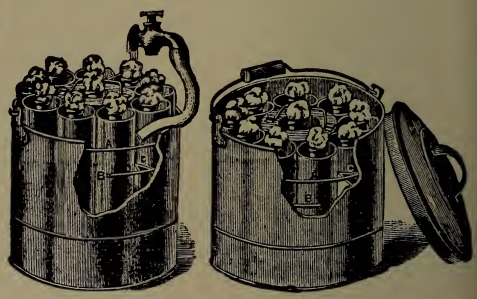


Figure 21

has not been kept at a proper temperature or has been handled by unclean hands or exposed to the germs of typhoid fever, scarlet fever, diphtheria or other infectious disease, it should be sterilized—that is, heated,

in order to kill the germs. Two methods of heating milk are in common use—one known as sterilizing, where the milk is heated in an Arnold sterilizer (Fig. 20) to a boiling temperature (212° F.) for 1 to 1½ hours; the other as pasteurizing, where the milk is heated in a Freeman pasteurizer (Fig. 21) to 155° or 160° F. for half an hour, and rapidly cooled by placing the bottles in cold water. Sterilized milk is hard to digest, quite constipating and has lost much of its value as a food. Pasteurized milk has not the same objections and is therefore to be recommended for general use. It must, however, be understood that milk even after being pasteurized must be modified as advised in previous paragraphs.

The nipples should be of black rubber, with the holes just large enough to allow the milk to drop easily from it when the nursing bottle is inverted. After being used, the nipple should be washed in cold water or placed in a solution of boracic acid. Before placing it on the bottle, the nipple should be warmed by dipping it in warm water.

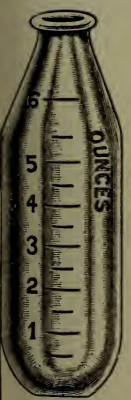


Figure 22

NURSING BOTTLE—RUBBER NIPPLE

The feeding bottle should be of such shape that it can be easily and thoroughly cleaned. (Fig. 22). Any milk left in the bottle after nursing should be thrown away, the bottle filled with a strong solution of washing soda, and set aside for several hours. With a bottle brush it should then be well washed inside and outside, thoroughly rinsed in boiled water and placed mouth downwards in the pasteurizer or other clean place to drain and dry.

CHAPTER XVI

DISEASES OF WOMEN

The distinguishing characteristics of woman's organization render her liable to certain diseases from which men are exempt. As these ailments are not necessarily associated with gestation, both married and single are subject to them.

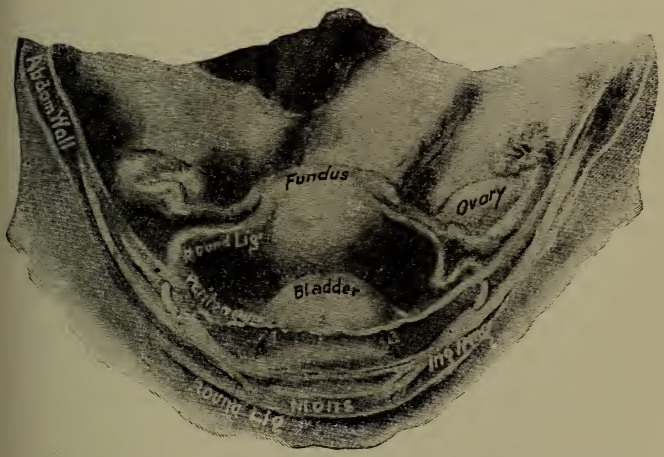
A consideration of these matters does not form a necessary part of this book, but I have been so repeatedly solicited for a book on diseases of females that I have concluded to add this chapter.

Social customs impose on woman unhygienic conditions that impair her constitutional vigor and favor the development of uterine diseases. Many of them are primarily local, but they exert such a profound influence on remote parts through the medium of the sympathetic nervous system that the whole constitution suffers; the functions of various organs are perverted and the social faculties are deranged to such an extent that the woman who was formerly happy and cheerful now becomes one of the most miserable of beings. In this way derangements of the stomach, liver and kidneys are caused; affections of the brain and nervous

system are produced, dyspepsia supervenes with innumerable symptoms, the blood-making process is impaired and often fatal consumption results.

All healthy females are subject to a peculiar function that recurs periodically about once in twenty-eight days, between the ages of thirteen and forty-five. It is called the *catamenia* or *menses* from *mensis*, a month, and is characterized by the elimination and discharge

Figure 23



The pelvic organs, showing the womb, ovaries, fallopian tubes, bladder, and ligaments.

of a sanguineous fluid. This period of menstrual activity is subject to variation in different climates, and in even our own, 43 degrees north latitude, remarkable instances are recorded where it has appeared much earlier or continued much later. It defines the prolific period of woman's life, and upon the regular occurrence of the function and its proper performance her physical

welfare materially depends. The derangements of menstruation are divided into three classes, viz.: *Ammenorrhoea, Dysmenorrhoea, Menorrhagia.*

AMMENORRHOEA

Ammenorrhoea signifies the absence of menstruation from other causes than gestation or the natural cessation at the end of the prolific period. When menstruation fails to appear at the proper age it is called *retention;* when it does not appear at the proper time after having been once established it is called *suppression.*

Retention is usually due to a delicacy of the constitution, in which the proper amount of vital stamina or nervous energy is absent, diseases of the lungs, liver, kidneys, anemia, etc.; or it may be due to disease or absence of the ovaries, uterus or vagina. The secretion may be prevented from escaping by an imperforate hymen. A certain amount of physical force is necessary for the performance of any function, and if at the time the girl should develop into womanhood anything occurs to lower her vitality it will tend to prevent the development of menstruation. Every mother should be solicitous for the welfare of her daughter at this critical period, for carelessness then may cost her life. She should be instructed what she may expect at such a time, lest suddenly surprised she may do something to her disadvantage.

The symptoms necessarily depend more or less on the cause of the retention. If the ovaries or uterus are absent, no menstruation will ever occur, no matter what treatment may be tried. If there is imperforate hymen or occlusion of the mouth of the uterus there

will be the usual monthly disturbance, but the secretion cannot escape. In such cases there will be local pains and, as it goes on, a fullness, distention, a sensation of bursting, straining at stool and when urinating, enlargement, etc., etc. The obstruction being of a mechanical character, surgical measures to establish the passage will be needed and must not be delayed too long.

When due to constitutional causes there will be a pale, sallow, waxy, sodden, sickly appearance of the complexion, the tongue furred, breath offensive, appetite variable, morbid cravings, nausea, general debility, easily fatigued, languor, pain in the back and limbs or bowels, cold feet, wasting of flesh, dyspeptic symptoms, constipation, palpitation, despondency, vertigo, headache, noises in the ears, and perhaps leucorrhœa, nosebleed, etc., etc.

Debility is the type of this condition, and remedies to invigorate—to build up—must be employed. At the same time we must attend to the correction of any functional disturbance that may occur. The blood is impoverished, there is anemia, and iron is generally needed, and as digestion is usually weak and the appetite poor it can be combined with a bitter tonic with advantage. A good and pleasant formula is: Elixir calisaya iron and strychnia, a teaspoonful before each meal, or compound elixir of phosphates is a good form in the same doses. They may be changed, giving one for a week and then the other. In some cases the addition of a little arsenic in the form of Fowler's solution materially increases the beneficial influence of the medicine. My prescription then would be:

Compound Elixir of Phosphates,	8 ounces
Fowler's Solution, . . .	1 dram

Dose—A teaspoonful before each meal.

Aloes has for many years enjoyed an excellent reputation in such cases; it improves nutrition, overcomes the constipation and favors the development of menstruation. Its disagreeable taste is the greatest objection. The following formula is a good one, not unpleasant and can usually be procured anywhere:

Sulphate of Cinchona, . .	½ dram
Red Carbonate of Iron, . .	1 dram
Aqueous Extract of Aloes, .	5 grains
Sugar in powder, . . .	1 dram

Mix thoroughly and make thirty powders and take one three times a day.

If palpitation is annoying, in addition give three to five drops of the homeopathic tincture of *cactus grandiflorus* in water three or four times a day.

When the nutrition and blood-making process has been improved by the foregoing agents, we may begin the use of remedies that have a direct influence on the uterine functions, as the *senecio gracilis*—also called female regulator, life root, squaw root, unkum, etc. It may be given in an infusion or fluid extract or homeopathic tincture ten to twenty drops three times a day in water or syrup. Dr. Dye's Mitchella Compound is, however, the best of all tonics for the womanly organs and we always advise that it be used in cases of this kind.

Forcing medicines are not advisable. All through the treatment give a nutritious diet that is easy of digestion, out-door exercise, pleasant scenery, riding, etc. Abstain from labor, study or anything that exhausts.

Suppression may arise from various causes, the most frequent of which are pregnancy or sudden cold. It may also be due to debility, to plethora, fevers or various diseases. When due to pregnancy it is not to be regarded as a disease. Suppression may occur in the most robust constitutions as well as in the weakly, while retention is almost always a consequence of debility. When suppression is developed gradually, the derangement increasing from month to month, it is generally due to some other disease, as consumption, etc., and the treatment must be selected with a view to overcome those conditions as well as to regulate menstruation.

Abrupt exposure to cold, getting wet at the period, violent mental emotions cause sudden suppression. The flow may be suddenly arrested or, these causes occurring at the end of the period, the next return of the same may not take place at the proper time. Such cases require prompt and efficient measures. When sudden cold is the cause, the uterus and ovaries are in a state of congestion and we should employ remedies to relieve the circulation. A hot hip bath, alcoholic vapor bath, hot mustard foot bath and hot applications to the lower abdomen are always beneficial; then internally give:

Tincture of Aconite, . . .	15 drops
Tincture of Belladonna, . .	5 drops
Tincture of Pulsatilla, . .	60 drops
Water, ...	4 ounces

Dose—Give a teaspoonful every hour and alternate with a tea of *serpentaria*, also known as Virginia snake root.

Usually in a few hours there will be sweating, relief from the fever and pain, and the flow will be re-established.

If due to plethora, the use of laxative medicines, such as Epsom salts, to act on the bowels, and repeated frequently is almost always advisable. At the same time give:

Bromide of Potassium, . .	1 ounce
Fluid Extract Black Cohosh, .	½ ounce
Fluid Extract Ergot, . .	½ ounce
Syrup and Water, each, . .	3 ounces

Making in all eight ounces, and take a teaspoonful three or four times a day throughout the interval, and as the time for the flow approaches give aconite in one-half drop doses every two hours for two or three days till the flow is established.

In lymphatic constitutions give:

Iodide Potash, ...	1 ounce
Fluid Extract Black Cohosh, .	½ ounce
Fluid Extract Senecio, . .	1 ounce
Simple Elixir, ...	6 ounces

Mix. Take a teaspoonful three or four times a day.

In anemia give the remedies advised for retention—iron, good diet, etc. In such cases a woman does not menstruate because she has not the blood to spare.

Menstruation is frequently irregular both as to the time of occurrence and the quantity and quality of the discharge. It may be too frequent or too long delayed. It may be too much or too little, and sometimes there will be at the period a colorless fluid instead of the natural discharge. These deviations from a natural standard are symptomatic and are to be treated accordingly. When too frequent, the ovaries and uterus suffer from an irritable or excitable condition and are apt to be congested by slight causes, and I would advise:

Tincture of Belladonna,	15 drops
Tincture of Apis,	10 drops
Water,	4 ounces

Take a teaspoonful four times a day.

Avoid too long-continued exertion on the feet, excitement, etc., and use the cool hip bath daily. If the ovaries are sore and painful on making pressure just inside the point of the hips alternate the above prescription with:

Bromide Potash,	1 ounce
Tincture Blue Cohosh,	½ ounce
Tincture Nux Vomica,	1 dram
Simple Elixir,	to make 8 ounces

Dose—A teaspoonful three or four times a day.

When the menses are delayed and scanty, showing ovarian and uterine torpor, remedies to stimulate this function are necessary, and if there is debility or anemia combine them with iron:

Fluid Extract Helonias,	1 ounce
Fluid Extract Senecio,	1 ounce
Fluid Extract Aloes,	1 dram
Simple Elixir,	6 ounces

Dose—A teaspoonful three times a day.

If anemia exists give:

Citrate of Iron and Quinine,	1 dram
Simple Elixir,	4 ounces

Dose—A teaspoonful after meals.

When the period should occur, a tea of motherwort (also known as *leonurus cardica*) may be drank freely for several days, or, better still, Dr. Dye's Mitchella Compound may be used according to directions for such cases.

DYSMENORRHOEA

Dysmenorrhoea signifies difficult or painful menstruation. A very great proportion of the women of

the present experience pain at this time, varying in intensity from a slight uneasiness to the most excruciating agony. The character and even the location of the pain varies greatly in different persons and is materially influenced by the cause. There are four varieties of the disease, known as *neuralgic*, *inflammatory*, *membraneous* and *mechanical*, and cases are often met in which the three varieties seem to be blended in one.

The NEURALGIC variety is most likely to be met in women of nervous temperament, in delicate health, and may occur at almost any period of menstrual life. The pain is often referred to the ovary, perhaps extends to the back and thighs and is often intense. Cold, mental emotions, sexual abuses, shocks and anything that excites or exhausts the nervous system may induce the attack. The treatment consists in relieving the pain at the attack and improving the general condition during the interval. The relief of the pain usually requires hot sitz baths, hot vaginal douches and something of a narcotic or anodyne character, and as much as I object to the indiscriminate employment of such drugs, the relief they afford must, when necessary, be the excuse for their administration. Five grains of phenacetin every four hours for three or four doses usually relieves the pain, or the following prescription may be tried:

Tincture of Belladonna, . .	15 drops
Tincture of Pulsatilla, . .	30 drops
Water, ...	2 ounces

Give a teaspoonful every hour until relief is obtained or the belladonna manifests its characteristic effect by dryness of the throat or dilatation of the pupil of the eye, when it should be suspended or given at longer intervals.

The hypodermic injection of one sixth or one quarter grain of morphia given by a physician is almost always reliable when all else fails. A suppository may be introduced into the rectum or vagina containing:

Opium, ...	½ grain
Extract of Belladonna, . .	½ grain
Cocoa Butter, ...	10 grains

This will generally give speedy and lasting relief. During the interval an effort must be made to improve the constitution so that another attack may not occur. Avoid tea and coffee and all stimulating diet, excitement, sexual relations, etc. Take salt water baths with friction, plenty of out-door exercise, etc., etc., and use this tonic:

Compound Syrup of the Hypophosphite,	7 ounces
Tincture of Cimicifuga, ...	5 drams
Tincture of Nux Vomica, . . .	1 dram

Dose—A teaspoonful three or four times a day.

During the week immediately preceding menstruation give the above prescription of belladonna and pulsatilla in teaspoonful doses three times a day or, better still, Dr. Dye's Mitchella Compound.

In the INFLAMMATORY variety there will be more or less of the general symptoms considered under chronic inflammations of the womb. The pain generally becomes worse when the flow is being established, gradually increasing till it reaches its height, and as the flow depletes the vessels of the uterus it subsides. There is generally more or less constitutional disturbance, dragging pain in the hips and back that is not entirely relieved between the periods, headache, leucorrhœa, etc. This form is often associated with a rheumatic condition.

The treatment of this form of the disease will be more fully explained when the consideration of chronic inflammation of the womb is reached. Among the other means employed will be the hot sitz bath, hot mustard foot-bath, hot vaginal injections, hot applications to abdomen, the use of opium and belladonna suppository at the period and just previous to the menstrual return, the glycerine and cotton tampon, medicated or not as may be desired. In using the injection use a fountain syringe, which every lady should have, and continue the flow as hot as it can be borne for half an hour or longer. It usually gives great relief. In the use of the tampon it should be begun three or four days before the anticipated trouble and continued until the flow begins. (For a further description see chronic inflammation of the womb.) For a week before the period commences take the following:

Tincture of Cimicifuga, . .	2 drams
Tincture of Aconite, . . .	15 drops
Tincture of Belladonna, . .	10 drops
Water, ...	4 ounces

Dose—A teaspoonful four or five times a day.

The cure must be effected in the interval, as the measures adopted at the period can only palliate at best.

Membraneous dysmenorrhoea is attended with great suffering, and with various modifications constitutes a large proportion of all the cases of painful menstruation. It is characterized by the formation and expulsion of clots of dark blood, shreds of membrane and in some cases of complete casts of the lining of the womb.

The suffering in such cases usually comes on from one to five days before the flow begins, with feverishness and constitutional disturbance, headache, backache,

pain in the pelvis, and as it progresses becomes periodic and labor-like and is in some cases more severe than ordinary childbirth and the female not unfrequently becomes unconscious. The pain is often spasmodic, expulsive and tenesmic and continues until the flow is fully established and the membrane or clot is expelled. As the pain goes on month after month local inflammation is developed and adds to the difficulty. The general health suffers, the ovaries become congested, enlarged, extremely sensitive, the nervous system becomes weakened and irritable and the condition is one of abject misery.

The successful treatment of this form requires an unusual amount of tact and skill, associated with perseverance. Affecting as it does a class of persons among whom there is a wide diversity of constitutional peculiarities, the treatment will have to be varied to meet the conditions presented by each individual case. The advice already given for relief at the period may be used and will no doubt palliate; but it will usually be found necessary to resort to opiates or narcotics to obtain very marked relief. The following prescription I have found suitable in nearly all cases, affording temporary relief when other measures had failed. I give the forms of the remedies most generally obtained at any and all drug stores:

Fluid Extract Blue Cohosh, .	3 drams
Fluid Extract Viburnum. . .	1 ounce
Simple Elixir,	enough to make 4 ounces

Dose—A teaspoonful every hour till relieved.

It should be employed before the pain becomes so exceedingly severe, and will prevent untold suffering.

If it is carried too far, drowsiness and prostration, inability to open the eyes, double vision, etc., will occur, when it should be stopped for some hours, till these symptoms wear off.

It is during the interval that the treatment must be directed to a cure. Dr. Dye's Mitchella Compound is the remedy to use because it goes right to the seat of the trouble and removes the cause of the pain. The following prescription will benefit the majority of cases:

Fluid Extract Black Cohosh, .	1 ounce
Fluid Extract Squaw Vine, .	1 ounce
Fluid Extract Colchicum Seed, .	¼ ounce
Iodide of Potass, . . .	1 ounce
Simple Syrup or Simple Elixir, .	5 ounces

Dose—A teaspoonful three times a day.

If there is debility give in addition to the above a good iron tonic or some syrup of hypophosphates containing quinine, iron and strychnine that can be got at any drug store ready prepared. Some of the prescriptions already given containing iron will do.

If rheumatism is the predominating trouble, in addition to the prescription containing colchicum it will be well to give alkalies, as the bicarbonate of soda in ten or fifteen grain doses several times a day, dissolved in a little water.

Throughout the treatment of such cases a course of hygiene is to be carried out looking to the improvement of the general health, regular hours, warm clothing, baths, good nutritious diet, avoidance of excesses, etc., etc. Marriage has often been urged as a means of cure, but with little propriety, for seldom has a person been benefited when this form of disease exists.

MECHANICAL dysmenorrhoea is due to the presence

of an obstacle to the exit of the flow. This obstruction may depend on a stricture or narrowing of the uterine canal or a curvature of the same to such an acute angle as to close the passage, to displacement, to the presence of a tumor or polypus within the passage or any other cause that tends to close the passage. These conditions cause sterility as well as dysmenorrhoea.

In such cases the cramp-like pains will be severe, the flow scanty or it may escape in clots or gushes; ovaries become tender and irritable and the whole system often takes on an irritable condition that is extremely unpleasant and annoying. A positive diagnosis can be made only by a proper examination.

Treatment consists in measures to render the canal pervious by the removal of whatever obstruction may exist, the dilatation of the passage by dilators, or incisions to straighten and enlarge the same. Of course such measures can be resorted to only by a competent physician, so there is no need to enlarge on the subject here. The use of warm baths is always useful. Thirty drops of fluid extract of viburnum prunifolium every three or four hours will give relief, and the use of the belladonna prescription already given and pulsatilla are always temporarily useful. In using pulsatilla, give two to five drops every two or three hours. If the lining membrane of the womb is inflamed it should be curetted or scraped—a very simple operation when done by a competent physician.

MENORRHAGIA

Menorrhagia signifies profuse menstruation and also applies to the unnatural and unusual frequency of its return. It may occur at any period of life from puberty to old age. It affects all varieties of constitutions,

although the sanguine are most liable. Excessive exertion, debility, organic diseases of the womb and ovaries, sub-involution, are fruitful causes. A defibrinated condition of the blood and plethora are among the most frequent sources of the disease. It may also be due to such diseases as anemia, tuberculosis, Bright's disease, affections of the spleen and liver, heart or lung disease, prolonged nursing, anger, grief, passion, excessive exertion at the period, sexual excesses, inflammation of womb, cancer, tumors and polypi. The symptoms vary with the nature of the disease. In mild cases there may be more or less debility, a sense of languor, palpitation, dizziness on exertion, etc., with an increased frequency or quantity of the flow. In the severer cases the hemorrhage becomes excessive, the countenance pale, blanched, great prostration, fainting, feeble and rapid pulse, uneasiness, every exertion causing the blood to start freely, etc.

The treatment must be directed to modifying the flow at the time and to averting its repetition.

During the flow, the recumbent position should be enforced and a bandage applied around the pelvis and abdomen. Then give a tea made of equal parts of cinnamon bark, hemlock bark and witch hazel leaves steeped strong. Give a tablespoonful every half hour or hour, lengthening the intervals as the urgency of the symptoms subside. Five to ten grains of gallic acid in a tablespoonful of water, either alone or in alternation with the tea. Ten drops of the oil of *erigeron* (fleabane) on sugar may be used with the same frequency of repetition. Either of these three remedies is reliable and may be used singly or in alternation.

Hamamelis, cannabis indica, aconite, etc., of the homeopathic school are excellent remedies. Large doses of ergot are good in cases where the uterus is large and flabby. Give a teaspoonful at once.

During the interval, measures adapted to the peculiarities of the case should be instituted. If there be anemia or a lack of fibrin in the blood, iron is necessary. If Bright's disease or affections of the spleen exist, treatment appropriate to them is necessary.

If there is syphilis, an alterative and tonic course is needed. If it is due to sexual excesses or abuses it must be abandoned, and remedies adapted to overcome the nervous prostration associated with this condition are to be used. Such conditions should receive the attention of a competent physician, as they are so variable that prescriptions given here may need to be varied more or less. A large proportion of cases need a uterine combined with a constitutional tonic, and for such the following will be found excellent:

Fluid Extract Helonias, . .	½ ounce
Fluid Extract Senecio, . .	1 ounce
Fluid Extract Trillium, . .	1 ounce
Fluid Extract Nux Vomica, .	1 dram
Simple Elixir, ...	5 ounces

Dose—A teaspoonful three times a day.

Give a nutritious but not stimulating diet, cold hip baths, sponge baths, moderate out-door exercise. Avoid all excitement.

If the patient be plethoric she should be given free cathartics frequently. If tumors or polypi exist, the proper surgical treatment for their removal is necessary.

VICARIOUS MENSTRUATION

If at the time when the menstrual period arrives a sanguineous discharge from some other part takes

place it is called vicarious menstruation. It may occur from any part, but usually comes from a mucus membrane like that of the mouth or nose, but it may also come from the nipple or an open sore. It presents all the characteristics of the menstrual flow and is usually due to a watery condition of the blood. When the uterine function is re-established, this vicarious function ceases. The treatment generally required is to re-establish the natural function, and for this purpose emmenagogue remedies are needed, among which cotton root in one or two teaspoonful doses of the fluid extract three times a day for several days at the approach of the period is a good remedy. Also *senecio gracilis* and other remedies advised under ammenorrhœa. If the discharge takes place from the lungs or stomach, remedies to control the hemorrhage as well as to bring on menstruation may be required. Of course any other perverted function should be corrected.

LEUCORRHOEA

Leucorrhoea (fluor albus, or "whites," as it is more generally called) is one of the most common of female complaints. It is characterized by a discharge from the female genitals, varying in color from whitish or colorless, to a yellowish or light green, to a reddish or brownish or even bloody; in consistence, from thin and watery to a thick, tenacious, ropy substance; in quantity, from a slight increase of the natural secretion to several ounces in twenty-four hours.

It is so general that there are few females who are not affected by it at some period of life. It is even met with in infancy. It may be so bland as to occasion little or no inconvenience, or it may become so acrid and corrosive that it will excoriate every tissue with

which it comes in contact; and when the virulent form occurs in the married it may cause in the husband an affection known as *balanitis*, which bears such a strong resemblance to gonorrhœa that unjust suspicions arise and occasion much domestic unhappiness.

The diagnosis of a virulent leucorrhœa from true gonorrhœa is made with difficulty and has often given rise to serious inquiry regarding the chastity of the female. A diagnosis, however, being possible by competent physicians, hasty or unjust conclusions should not be indulged. When this secretion is profuse or acrid it is very apt to cause sterility, and not infrequently is the cause of the most excruciating agony during the connubial relations.

For the most part, leucorrhœa is regarded as symptomatic of some disease of the uterus or vagina of either a functional, inflammatory or organic character, or it may be indicative of some disorder of the general health.

CAUSES

Anything capable of lowering vitality predisposes to leucorrhœa. It is generally present as a symptom or complication of almost every form of uterine disorders. Influences that cause inflammation, ulceration, congestion, laceration and displacement of the uterus, menstrual derangement, etc., give rise to and perpetuate this disorder. Among the most common causes we may mention are luxurious living, sedentary habits, excessive sexual indulgence, masturbation, abortions, uncleanliness, piles, abnormal growths, prolonged nursing, pregnancy, too rapid child bearing, injuries, gonorrhœa, cold at the menstrual period, etc.

SYMPTOMS

Among the early symptoms are generally a sense of heat and soreness, amounting to pain or smarting, and a sense of swelling followed by the development of the discharge which may be a white, greenish, yellow, brown or reddish hue. The sufferer becomes pale and emaciated, her eyes look dull and heavy, there is severe and prolonged pain in the back and loins; the functions of the skin, stomach and bowels become deranged, the circulation is impaired, the head hot and feet cold; there is a loss of strength and energy, languor, pain in the stomach, failure of appetite, headache, dyspepsia, nervousness and hysteria.

As the disease progresses, the blood becomes impoverished and the female weak and emaciated; the feet and ankles swell, urination becomes frequent and painful, the mind is dejected, the victim becomes apprehensive, despondent and melancholy. This state of things produces displacements; sterility and impotency result, and the sufferer is reduced to abject misery.

The disease may be uterine or vaginal or it may be a combination of both, and the character of the discharge as well as the symptoms will depend materially upon the cause, the location of the disease and the amount of inflammation.

TREATMENT

The successful treatment of this affection will depend largely upon the recognition and removal of the disturbance that occasions it, the inculcation of proper hygienic regulations and the employment of appropriate remedial agencies. It will therefore be seen that the treatment must necessarily vary to suit the individual case. We must have an avoidance of sexual

excesses, while the mind must be withdrawn from all lascivious objects. Overexertion, fatigue, heated rooms, must be prohibited. The most perfect cleanliness of the parts must be enforced or our efforts will fail. Daily and thorough syringing is essential to success. The morbid secretion is more or less irritating of itself, and if allowed to remain undergoes decomposition, becomes acrid and offensive and is extremely prejudicial to the integrity of the mucous membrane lining these parts.

We must seek by every means at our command to invigorate and improve the condition of the general health. Plenty of exercise in the open air, good, nutritious diet and regular habits are necessary, and when other diseases co-exist they must receive appropriate attention.

The employment of injections of tepid water, soapsuds, medicated or otherwise, for cleanliness alone are necessary and should be repeated at least once a day with a fountain syringe that will allow a continuous stream to thoroughly irrigate the parts and effectually wash away every particle of secretion.

HOW TO TAKE A VAGINAL DOUCHE

The woman should lie on her back with knees drawn up and the hips raised on a pillow or resting on a douche pan. The fountain syringe should be about two feet

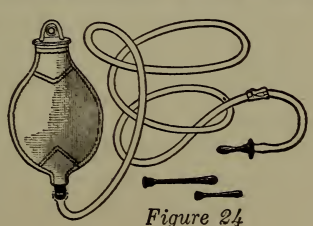


Figure 24

above the level of the hips and the douche water warm or hot (never cold). The tube or nozzle should be large and curved with three small openings on the side near the tip. Vulcanite or hard rubber nozzles are the best. Before inserting the nozzle in the vagina allow the water or medicated solution to run through it to expel the air. Care should be taken that the water does not get into the womb, as that might cause an attack of uterine or womb colic. When given to cure inflammation in the pelvic organs the douche water should be quite hot, so as to contract the blood vessels and subdue the inflammation. A simple cleansing douche may be taken at any time, but when only one hot douche is needed each day it should be taken just before retiring. Much inconvenience and trouble will be saved by taking the vaginal douche whilst reclining in a bath tub.

As an injection, water medicated with carbolic acid, ten to fifteen drops to a pint, once a day is excellent. When the smell of carbolic acid is objectionable, permanganate of potash may be substituted, half a dram to a quart, used freely.

When the disease is confined to the vagina, astringent antiseptic lotions are desirable, of which the following will usually meet the indications:

(1) Sulphate of Zinc, . . . 1 ounce
Powdered Golden Seal, . . 3 ounces

Mix. Put a heaping teaspoonful in a pint of hot water and let it stand till lukewarm, and use at once, repeating it at least every day.

(2) Sulphate of Zinc, . . . ½ ounce
Borax, ... 2 ounces

Directions—One teaspoonful dissolved in one quart of lukewarm water and used as a vaginal douche at bedtime.

(3). One or two teaspoonfuls of lysol in one quart of water makes an excellent cleansing and antiseptic douche.

Constitutional treatment is essential. Tonics and alteratives are needed. At the same time if any function is perverted it must be corrected by proper means. Give:

Fluid Extract Stillingia,	1 ounce
Fluid Extract Life Root,	1 ounce
Fluid Extract Black Cohosh,	½ ounce
Fluid Extract Buchu,	1 ounce
Simple Elixir,	to make 8 ounces

Take a teaspoonful three times a day between meals and at night.

If it has been brought on by sexual abuses and the mind full of lewd thoughts, the nervous system irritable, add an ounce of bromide of potass to the above.

Alternate the above prescription with a good tonic before meals. Elixir of calisaya bark and iron already mentioned is very appropriate.

CHRONIC INFLAMMATION OF THE WOMB

This is a very common affection and one which, while it exerts a very important influence on the uterine system, is very imperfectly understood and often passes unnoticed and neglected.

Modern society imposes upon woman certain unhygienic customs that impair the vigor of her constitution and give rise to a variety of imperfect physical conditions that are extremely liable sooner or later to develop an inflammation of the womb. The disease once established, the whole economy suffers; all the vital processes are so much modified that a spontaneous recovery is very rare. Through the medium of the sympathetic nervous system the morbid influence is propagated to remote organs, causing complications that are often mistaken for the real disease and, as may be supposed when such is the case, the treatment

is thus rendered a failure. Indeed, so great is the influence exerted by this organ on all parts of the body that few patients escape these sympathetic phenomena.

The inflammation may attack any part of the organ, and the symptoms will necessarily vary with its location and severity, and as the disease continues unchecked or without modification by appropriate remedial agencies it results in changes in its structure and position that occasion a new class of painful and unhappy symptoms.

The causes of this affection are numerous and may operate directly to cause the trouble or, by indirectly influencing the functional activity of the pelvic organs, excite the disease; anything that lowers the vital standard predisposes to it. Among the most fruitful causes I may mention excessive sexuality, masturbation, prevention of conception, improper reading, lascivious thoughts, heated rooms, habitual use of cushioned seats, stimulating diet, cold at the menstrual period, uncleanliness, constipation, sedentary habits, violent exertion, tight lacing, abortions, improper management at childbirth, getting up too soon after confinement, piles, inflammation of the bladder, etc.

SYMPTOMS

The most prominent local symptoms experienced are pain in the back and loins, inability to stand or walk, pain in the side and region of the bladder, sense of weight and bearing down in the pelvis, sometimes so severe as to occasion the most intense agony, and irritability of bladder. Leucorrhœa is at first light colored, but as the disease progresses to ulceration it becomes thick, yellow, green, offensive and often bloody. There is pain at menstruation, derangement of the flow,

cramps, sterility and abortion. The inflammation increases the weight of the womb beyond the supporting power of its attachments, consequently displacements occur, occasioning new symptoms and increasing the difficulty. The womb becomes very sensitive to the touch, tender and painful. By pressure upon the rectum it causes constipation, sometimes alternating with diarrhœa, piles, etc. As the disease goes on, the nervous system becomes involved, abnormal sensations are experienced in various parts of the body. There is excruciating headache, backache, spinal tenderness, hysteria, numbness, fainting, palpitation, difficulty in breathing, pain under the breast and side, feet and hands cold, skin dry and sallow, the stomach and liver become deranged, the tongue coated, breath offensive, the sufferer becomes feeble, cough develops and there may be rapid decline. Sometimes the breasts are affected. There will be perversion of the intellectual faculties, and the victim becomes despondent, nervous, fretful and suspicious.

Sterility is a frequent consequence of the disease. The mucous membrane may undergo ulcerative degeneration, and displacements almost invariably supervene if it continues unchecked for any great length of time.

TREATMENT

Much diversity of opinion exists as to the procedure necessary in such cases and it is really an open question whether *gynecology*, as the science of uterine diseases is called, is really a benefit or a damage to the sex. If the treatment was confined to competent practitioners the question would not admit of debate, even if differences of opinion existed; but in the hands of the unskillful, as is too often the case, not only is there no

benefit obtained from their treatment, but the disease may be aggravated and perhaps serious complications induced.

It has become a fashion for physicians to make a specialty of "diseases of women," and every professional tyro believes it is "his *forte.*" He knows such ills are prevalent—that they admit of good fees for "examinations" and "treatment," and that woman has been schooled to the belief that it takes a good while to cure, hence they have unlimited opportunity to prey upon the unfortunate. If the majority of such doctors were submitted to an examination they could neither explain the anatomy of the parts nor diagnose the ailment, much less cure the disease. It is for this reason gynecology is in danger of losing caste, and opens the door to debate whether the harm done by the unscientific is not infinitely greater than the good the skillful can accomplish.

Local applications are doubtless good in their place, but the indiscriminate employment of caustics and what not cannot be too severely condemned. When other organs become diseased they are fortunately out of the reach of such torture and are cured by other and more agreeable means, and many may wonder if the liver and kidneys can be cured by other means why uterine diseases may not also escape the necessity of local torture. The reader may think this is begging the question and, while I admit it may be so in some cases, the parallel is often but too obvious.

The object of local applications is for the most part to excite healthy action by changing the conditions that exist and at the same time modify pain and irritability.

We can excite a change in the condition of the uterus, relieve its dilated blood vessels and materially lessen its weight by the application of glycerine, which may be medicated or not as desired. The glycerine is to be applied on a pledget of cotton and should be renewed every day or every other day. Take a piece of cotton wool about the size of an egg, saturate it with glycerine and apply it well up against the neck and mouth of the womb and allow it to remain. A small string may be attached to the tampon to facilitate its removal, and it will be most conveniently applied with a pair of dressing forceps through an ordinary tubular speculum. Many succeed in applying it themselves without. The cotton should not contain so much glycerine that it can be squeezed out in a stream.

The result of this application will be to excite a profuse watery discharge that will deplete the uterine vessels and induce a change in the circulation, relieving the congestion with all its dragging and disagreeable consequences. When it is removed, thoroughly syringe the parts, removing every particle of morbid secretion, and repeat the application.

In long-standing cases, when the womb has become enlarged, a little tincture of iodine may be added to the glycerine in the proportion of one dram to the ounce and applied in the same manner.

After the congestion and inflammation have been reduced by this treatment it will be necessary to follow up the advantage gained by the use of astringents and tonic applications which may be applied on cotton in the same manner. The fluid extract of golden seal or witch hazel or pinus canadensis may be mixed with glycerine in about equal parts of whichever one is

selected and used. As these applications stain the clothing, proper precautions to prevent such a consequence should be taken. This is easily done by a small pad of absorbent cotton placed just inside the vagina or by wearing a napkin. Sitz baths may be employed with great good, but in their use it may be necessary to accustom the patient to them. They may be begun warm or tepid and the temperature gradually lowered until in a few days they are employed cold. They should be followed by brisk rubbing to excite vigorous reaction. When, however, they are intended to relieve pain, soreness or excitement they should be used warm or even hot.

The employment of local applications must not, however, be regarded as the *sine qua non*. We have several medicines about the remedial influence of which on these parts there cannot be any doubt, and their employment must not be overlooked. Their combination or alternation with agents that control special symptoms and conditions that are outgrowths of the main disease must constitute an essential feature of the treatment.

The black and blue cohosh, the squaw vine, pulsatilla, lady slipper, bromide of potash, etc., may be used singly or in combination, for their influence in diminishing pain, controlling inflammation and relieving reflex-excitability. They overcome the nervousness that almost invariably attends inflammation of the womb. Dr. Dye's Mitchella Compound gives quicker and surer relief than any other medicine that can be used.

The following prescription is a good one. Take, of

the homeopathic tincture or fluid extract, the tincture being preferred, thus:

Tincture of Pulsatilla, . .	1 dram
Tincture of Black Cohosh, .	2 drams
Water or Simple Elixir, . .	4 ounces

Mix. Dose—A teaspoonful three or four times a day.

After it has been taken two or three weeks substitute the following:

Fluid Extract Mitchella Repens,	1 ounce
Fluid Extract Caulophyllum, .	¼ ounce
Fluid Extract Cypripedium, .	½ ounce
Bromide Potass, . . .	½ ounce
Simple Elixir,	enough to make 4 ounces

Mix. Take a teaspoonful three or four times a day.

The use of nux vomica given alternately with either the above, on the same day, is advisable. To avoid too many medicines it may be given in combination with other remedies if any are being given at the same time. If there is much breaking down of the system in general it may be combined with iron and quinine in form of a pill or syrup or, where the nervous symptoms predominate, with phosphorus, thus:

Tincture Nux Vomica, . .	1 dram
Quinine, ...	30 grains
Syrup Hypophosphites, . .	4 ounces

Dose—A teaspoonful three times a day, just before or after eating.

It is not usually advisable to continue any prescription too long without a change, or the beneficial effect will be lost. For that reason I seldom give large prescriptions, except the patient lives at considerable distance, when I give enough to last a month at a time. Special symptoms must always be considered in making

prescriptions, and in this disease they are so exceedingly numerous that not a little tact and judgment must be exercised. Constipation is a very frequent symptom and one that should not be overlooked. Many of the cathartics usually employed increase the determination of blood to the pelvis and, therefore, should be avoided in all cases. The nux vomica in many cases will be all that is necessary. When it is insufficient, salines like Rochelle salts, seidlitz powders, citrate of magnesia or even some of the laxative waters are advisable. Common Epsom salts in small doses every morning in some cases do great good. The following makes a very good aperient and tonic:

Epsom Salts, ...	2 ounces
Sulphate of Iron, . . .	¼ ounce
Cider, ...	1 pint

Mix. Dose—A tablespoonful once to three times a day.

The cider relieves the unpleasant taste of the salts. The iron may be left out if the patient is full blooded.

Trouble with the bladder often demands relief temporarily while the real disease is being treated. The smarting and burning and frequent desire to urinate can usually be relieved by:

Tincture Cantharides, . .	10 drops
Water, ...	4 ounces

Dose—A teaspoonful every two or three hours.

As soon as relief is obtained it should be omitted. The headache will generally yield when the cause is removed, but during a severe attack thirty grains of bromide of potass dissolved in a wineglassful of water may be taken and repeated in two hours if need be.

The sitz bath is an agent of great value and should always be employed as an adjunct to other measures.

The directions given for its use in this and in a preceding chapter are equally appropriate. Copious hot water douches should be taken morning and night. A change of habit is beneficial. Indolence must not be tolerated and, on the other hand, excessive labor should be avoided. Rest, especially during menstruation, is very helpful. Heavy lifting is to be prohibited, as it would be very likely to cause displacement. Marital relations must be suspended entirely or nearly so and care must be exercised to avoid any circumstance that could cause any form of sickness on account of its liability to aggravate the disease being treated.

Perseverance is necessary for success, and as improvement progresses carelessness cannot be indulged. I have seen the slightest indiscretion cause a relapse as severe as the original disease. Occasionally there will be cases so obstinate or complicated as to demand the greatest professional skill, and no general rule can be written that will suit all. I have endeavored in this chapter to avoid advising such measures as would be impracticable and have necessarily confined myself to more simple and easily applied forms of treatment, and should any one find the directions inadequate to meet all the contingencies that grow out of so varied and troublesome a disease I will be pleased to consider the case in its individuality and render such service or advice as may lead to its cure.

I have purposely omitted a discussion of the varieties of inflammations and their divisions by localization, as such a consideration could only result in confusing the unprofessional. To them the fine distinctions as to whether the inflammation is limited to the mucous

membrane of the uterine neck or to the deeper structures, whether these conditions are confined to the neck of this organ or whether they extend to and involve the whole or only a part of its body is a matter of no practical value, as the symptoms would not enable them to diagnose or even treat the matter with any material difference; for this reason they have been omitted, and not because, as some critical individuals may claim, on account of carelessness or indifference.

ULCERATION

This is a frequent result of inflammation and presents several varieties, varying from a slight abrasion to a deep-seated intractable sore. It may be limited to a superficial ulceration or erosion of the mucous membrane of the neck or mouth of the womb, or it may extend into the body of the organ and into the deeper tissues. This is one of the great hobbies of the so-called "specialist" and if the patient's financial capability admits, "ulceration" is found. Do not understand me as denying the existence of such a disease, but that it is *not* always present. It is likely to result when the inflammation has continued for a long time unchecked or been improperly treated. It indicates impairment of vitality, either local or general or both. The degeneracy of tissue may be local, but cannot exist long without more or less injury to the general health if, indeed, the general health has not been materially impaired before the ulceration occurs.

The symptoms will necessarily differ, according as the ulceration is superficial or deep, limited or extensive, and will accord more or less with those already described under chronic inflammation. There will be leucorrhœa, varying from slight milky, watery or colorless to thick,

tenacious, purulent, green, lumpy or bloody. There will be pelvic and sacral pains, backache, ovarian irritation, dyspepsia, irregular menstruation, menorrhagia, neuralgia, pains in various parts, irritation of the bladder and rectum, debility and more or less disturbance of the general health. A positive diagnosis without the speculum is impossible, the employment of which reveals the presence or absence of the ulcer and its character. A celebrated writer has said:

> Treatment of uterine ulcer is one of the most important and difficult in the whole range of medical science.

We must be guided by the character and extent of the ulcer, the existing inflammation and the state of the general health. The employment of local measures is necessary. Caustics, stimulants, astringents, etc., must be selected with care. In mild cases, carbolic acid applied full strength or nitric acid applied on a pine stick dipped in the acid and allowed to dry before applying, will generally suffice; but in more deeply seated sores more vigorous treatment may be necessary—caustic potash, solid nitrate silver, chromic acid, etc. When applying them, the adjacent parts must be carefully protected. It is always best to employ a physician who understands such diseases and who is provided with proper facilities and who will necessarily conduct the subsequent treatment. In mild cases, fluid extract golden seal or pinus canadensis may be applied on lint and changed daily, with injections to thoroughly cleanse the parts, and then repeat the applications. Daily vaginal douches of lysol solution (one teaspoonful of lysol to one quart of water) are cleansing and antiseptic; healing injections of an infusion of white pond lily root, golden seal and witch hazel with chlorate

of potash one half ounce to the quart are useful and may suffice in the milder cases.

Some physicians apply an iron devised for the purpose, heated to a white heat. Some apply tincture of iodine and follow with the glycerine and cotton dressing already described under inflammation. The plans of treatment are as various as physicians are numerous, and as the afflicted are not apt to try it themselves minute description is not necessary.

Whatever local measures are adopted, the plan is to destroy the ulcer and make a healthy sore, or to so stimulate the tissues in which it is seated as to bring about a healthy action.

As already remarked we will usually find an impairment of the general health which must be built up or we cannot hope to succeed. It is impossible for a sore to heal while the blood is impoverished and impure, the fluids of the body perverted and the nervous system morbidly acute. Inculcate thorough hygiene, open air exercise, salt water baths, generous but unstimulating diet, regular habits, avoidance of fatigue and sexual relations, then take the following:

Fluid Extract Corydalis, . .	1 ounce
Fluid Extract Cypripedium, .	1 ounce
Fluid Extract Hydrastis, . .	1 ounce
Fluid Nux Vomica, . . .	1 dram
Simple Elixir, ...	5 ounces

Dose—A teaspoonful before meals three times a day.

This may be advantageously alternated with ten to fifteen drops of dialized iron in water three times a day. Build up the vital forces by every possible means. At the outset, understand, time and perseverance are necessary. The foregoing are but a few of the many

remedies at our command which come under the general classifications of alteratives and tonics and are useful in depraved conditions of the system, but as these cases seldom undertake to conduct their own treatment they are probably sufficient to indicate the character of the treatment needed in a general way.

DISPLACEMENTS

There are three principal varieties of uterine displacement: Downward (*prolapsus*), backward (*retroversion*), forward (*ante-version*). A slight deviation from the normal position may occur without occasioning any very serious trouble, but as the degree of deviation is increased the trouble arising from such displacement is augmented. Displacements to one side may occur, but are not so frequent. Two other forms of displacement are met with in which the neck remains in its natural position and the body is displaced. This, of course, necessitates a bending of the neck. When the body is tipped backward it is called *retro-flexion*; forward, *ante-flexion*.

Displacements are usually complications and effects of inflammation, lacerations or tears of womb, sub-involution after labor or miscarriage, tumors, although they may be produced by getting up too soon or at work too early after confinement, heavy lifting or jumping, or falling from a height and striking on the feet.

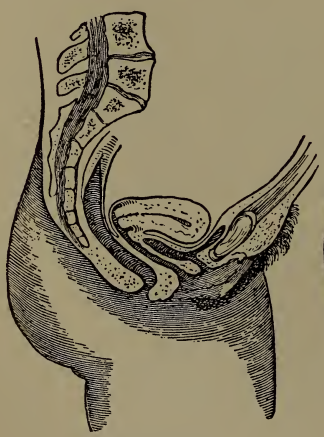
The nature of the displacement involves the condition of other organs, and the symptoms necessarily depend in a measure on the character and degree of displacement.

When the displacement is downward, (prolapsus) which is the form most frequently observed, there is painful dragging and bearing down, sometimes so

severe that it seems as if the whole of the contents of the pelvis would be forced outside of the body, backache, headache, pain in the limbs and perhaps swelling of the feet. The pressure on the rectum causes piles and constipation, and on the bladder, frequency or difficulty in urinating. A sinking and sense of goneness in the stomach and all the symptoms that accompany the inflammatory troubles already described are usually present.

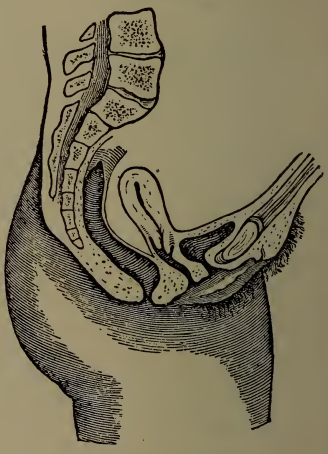
When it is backward (retroversion), in addition to the symptoms of prolapsus which generally are present,

Figure 25



Anteversion

Figure 26



Retroversion

the pain in the back is greater and often extends to the head, and the pressure on the rectum may be so great as to render an evacuation of the bowels almost impossible. An examination reveals the mouth of the uterus pointing toward or pressing against some part

of the bladder, and the body may be felt lying in the hollow of the sacrum. If the case is one of ante-version the body of the womb presses forward and downward upon the bladder, while the mouth is turned backward in the hollow of the sacrum. The bladder becomes very irritable and the suffering is often intense.

Usually the symptoms are so plain that a diagnosis can be made from the statement of the patient, but there is a possibility of error. Tumors constitute the principal causes of mistake.

In the flexions (anteflexion and retroflexion) in addition to the foregoing symptoms, the neck of the womb

Figure 27

Anteflexion

Figure 27a

Retroflexion

being bent on itself backward or forward as the case may be is likely to obstruct the canal and become an impediment to the exit of the menstrual discharge on the one hand or the ingress of spermatozoa on the

other, causing in the first instance dysmenorrhœa, in the other barrenness.

Take the finger of a glove in your hand up to the middle and allow the hand to fall over and you have a fair idea of the operation of a uterine flexion.

As I have already remarked, these displacements are usually directly or indirectly caused by inflammation in some form or other. If this pathological fact is borne in mind it will be of great value in understanding the treatment.

As already stated, inflammation is the most potent cause of uterine displacement. Congestion operating in the same way is also a fruitful cause. They act as causes by increasing the weight of the uterus beyond the power of its supports to hold it in place. Anything that increases its weight predisposes it to displacement; violent exertion or even long continuance in the erect posture under such circumstances cause it to settle into displacement. When congested or inflamed, jumping, jolting, lifting, straining, dysentery, etc., etc., displace it.

The sufferings caused by it can be appreciated only by those who have experienced it. In some the deviation has been gradually effected and they do not seem to suffer acutely; others are unable to walk or stand. When it has occurred suddenly, as a result of a strain or fall or lifting a heavy weight, the suffering is often described as acute. Very seldom, however, if ever, does it occur without causing more or less suffering and constitutional disturbance, and when it has once occurred it is very apt to recur.

The inflammation extending to adjacent structures sometimes causes adhesions that securely fasten the

organ in its false position and entail lifelong trouble. This one circumstance points out the importance of early efficient treatment.

There are few troubles that assail human beings the treatment of which have received more attention than this. Supporters without number have been devised. When they have been arrayed for examination it would almost seem as if the ingenuity of man had been exhausted. Every conceivable form and shape, from a ball to a horse shoe; from a simple cup to the most complicated receptacle; light and heavy, large and small; some easily adjusted, others that cannot be; indeed, a large majority of them seem to have been built without any regard whatever to the purpose they were intended to serve. Many of them relieve one pain to cause another. It would take the whole book were I to attempt to describe them. Probably they will always be in demand; almost all physicians use them. Indeed, it is fashionable. No physician wants to show his ignorance by admitting he doesn't understand one or know how to apply it. Of course, anyone can apply one, even if it *is* adjusted wrong side up!

There is a principle involved in the cure of these troubles that it will be well to remember. The effect of inflammation and congestion is to increase the size and weight of the womb so that it is disposed to fall from its natural position by its own gravity when its supports have become weakened. A supporter may elevate it to its natural position, but it does not overcome the increased density nor strengthen the supports. If properly adjusted the supporter may afford relief, but not cure. At best they are but an auxiliary, and

those who rely on them as curatives can but meet with disappointment.

The indications then are to arrest the inflammation, remove the extra weight occasioned by it and strengthen its supports. Were I writing this chapter especially for the profession I should consider the physiological and pathological conditions involved more at length; as it is, probably it is unnecessary.

We will frequently find cases where the inflammation has subsided and its consequences alone remain; again, the inflammation continues. In either case we must adapt the treatment to the needs of the individual.

Replace the womb and if there is inflammation proceed as advised under that head, using the cotton tampons properly applied instead of a supporter. Medicate it if necessary. The cotton will not cause the pain a hard instrument will, while it can be made a medicated appliance to cure the inflammation instead of increasing it, as is sometimes the case with solid supporters.

By adapting the size, shape and position of the cotton supporters the uterus can be maintained in position.

When the inflammation does not require special medicines for its control, alteratives to overcome the adventitious deposits that increase its weight are to be administered. Take:

Fluid Extract Corydalis,	1 ounce
Fluid Extract Ergot,	1 ounce
Fluid Extract Black Cohosh,	½ ounce
Nitrate Potash,	½ ounce
Simple Elixir,	to make 8 ounces

Mix. Give a teaspoonful three times a day.

Overcome the muscular weakness of the uterine supports by tonics, exercise, etc., thus:

Fluid Extract Nux Vomica,	½ dram
Fluid Extract Golden Seal,	2 drams
Elixir,	to make 4 ounces

Dose—A teaspoonful at meals.

The existence of other symptoms that demand attention may require that other agents be added to these prescriptions to fulfill the special indications.

Cold sitz baths, hot vaginal douches, regular bowels, thorough rubbing, are advisable. Exercise that brings the relaxed muscles into play and develops their strength should be employed; carefully at first, increasing as it will answer.

We must remember that the contents of the abdomen are disposed to press the contents of the pelvis downward and thus interfere with the cure of displacement. Many females of a lax muscular habit are thus affected to a great extent and should be aided by an external band or support, as it will afford relief from many distressing symptoms. They should, however, remove this artificial support at stated intervals and take such exercise as will bring the muscles involved into action and thus develop them. Nearly any treatise on calisthenics will give the information needed on these points.

Any muscle that has its function suspended for any considerable length of time becomes weakened and attenuated; hence, I say supporters cannot cure their debility and I wish to avoid them. A great deal of discretion, however, is needed to determine when and to what extent supports should be used. No absolute rule can be laid down. We must be governed by the circumstances and conditions present.

Tonic and astringent medicaments are required as applications with the cotton tampons and injections during the time to overcome the relaxation of the pelvic tissues, and the pinus canadensis, the golden seal, witch hazel, etc., may be used as already suggested in the treatment of chronic inflammation, after the inflammatory symptoms have yielded.

Much care will be needed to adjust the tampons properly to secure the greatest benefit from their use. They should be changed daily.

To replace a displaced uterus is not always as easy as may be supposed, and many who have tried it and been disappointed in the success of their efforts will often regard themselves as unequal to the task. If there are no adhesions binding it firmly in its malposition it can be easily accomplished.

First remove the weight of the abdominal viscera; take advantage of the law of gravity, secure the aid of atmospheric pressure if needed and accomplish the rest by manipulation. The first and second steps are accomplished by the knee-chest position. Let the patient kneel upon a table or some unyielding surface—lounge, sofa or even the floor—then bending the body forward until the chest and abdomen lie upon the table, tilt the body slightly to the left so the left side of the face and shoulder are upon the table, the arm thrown behind her, the hips being kept elevated as high as the length of the limbs from the knee to the hip will admit.

This position relaxes the abdominal muscles and the contents of the abdomen gravitate toward the chest, entirely removing their previous weight from the pelvis. The contents of the pelvis are now at liberty to

gravitate toward the abdomen and in some cases will do so without any help, resuming their natural position. If now an effort is made by manipulation to replace the uterus, the air fills the vagina and by its pressure crowds the pelvic organs towards the abdomen. In simple prolapsus or downward displacement this will usually be sufficient, but if there are adhesions, of course, no change will be effected.

Sometimes when the case is one of retroversion the uterus is wedged into the hollow of the sacrum so securely that manipulation will be necessary, and the operator will often be surprised to find the uterus suddenly leave his fingers and resume its normal position, even in cases where all previous efforts had been unavailing.

If an unprofessional person cannot effect a replacement by this method there is little use of trying further.

If now a supporter has been selected it should be adjusted at once, otherwise the cotton tampon should be inserted before the woman changes her position and while the womb is in its natural position, or perhaps a little higher up than natural, after which let her lie down and rest a little while before she makes an attempt to get upon her feet.

In chronic cases there will be a disposition to get out of place, but the woman has it in her power to relieve herself at any time when she finds herself in agony from a sudden displacement if she will but make endeavor as above described.

This plan may have to be repeated in long-standing cases many times, and at the same time there should be a constant endeavor to invigorate the whole system, to renew the supporting power of the attachments so

that they can hold the organ in its proper position without the aid of any artificial devices. Instrumental supports seek to hold the organ in its place independent of change in the condition of the organ itself or improvement of its muscular attachments. They do not cure but substitute.

By the plan I have just described, to the originality of which I make no claim, we seek to make a permanent cure, using mechanical aid only as an adjunct and to temporarily effect what we endeavor by this and other means to make lasting.

Although I have argued against artificial supporters (instrumental), I do not wish to be understood that they are useless; such a position would be extremely ridiculous in the face of their employment by some of the brightest lights of the profession. I am aware that there are cases in which there is nothing left but to use them, and it is certainly better to do so than to have the woman suffer. I, however, wish to avoid them when possible. I wish to cure instead of simply relieve and am confident that properly managed cases can be cured by the foregoing plan in which the artificial treatment has previously failed. Should medicines, position and pessaries fail to cure the case a surgical operation to shorten the ligaments or even remove the womb may be needed.

SUB-INVOLUTION

During gestation, to accommodate the development of the fœtus, the uterus is necessarily increased in size. The walls do not become thicker, but more extensive. The return to its former size after delivery is termed involution. If this process is arrested before it is complete, the uterus is left in a state termed sub-involution.

The cause of this arrest is generally inflammation, the degree of which is various. It may or may not be attended with febrile symptoms, the contractions are feeble and inefficient, the muscular wall loses its power to effect the shrinkage necessary. While this condition lasts there is danger from hemorrhage. As time wears on and the acute are succeeded by chronic symptoms the danger of sudden hemorrhage may subside; but there remains more or less disturbance of the uterine function, liability to displacement, etc.

Women are often heard to say they have never been right since their baby was born. In many of such cases the process of involution has doubtless been arrested before completion. The best time to correct this is when it occurs. If the womb remains large and flabby, if hemorrhage continues, with pain, weight, heat in the lower abdomen and pelvis, it should receive attention.

If the inflammatory symptoms run high, use aconite or veratrum or pulsatilla in small and frequently repeated doses, say fifteen drops of either, or each, in a glass two thirds full of water and take a teaspoonful every hour or two. Alternate this with:

Fluid Extract Ergot, . .	½ ounce
Fluid Extract Black Cohosh, .	¼ ounce
Water, ...	2 ounces

Dose—A teaspoonful every four hours.

After the case has become chronic (and they are met with months or years after the delivery), a course of treatment must be instituted to remove adventitious deposits and restore the natural functions of the womb and ovaries, together with such local applications as

shall excite a new and more vigorous activity in the absorbents of these parts. Take:

Fluid Extract Corydalis, . .	1 ounce
Fluid Extract Phytolacca, . .	½ ounce
Fluid Extract Pipsissewa, . .	½ ounce
Simple Syrup or Elixir, . .	2 ounces

Dose—A teaspoonful three or four times a day.

If there is a disposition to hemorrhage or profuse menstruation, substitute an equal quantity of fluid extract of beth root (*trillium*) for the *phytolacca* (poke root). If there is anemia, give tonics, some of the formula already given will answer. Local applications are valuable. Iodine may be used either applied to the womb directly and followed by the glycerine and cotton tampon or it may be applied mixed in the glycerine as advised in chronic inflammation. An external supporter made to fit evenly and moderately compress the abdomen will be found useful.

Out-door exercise to invigorate, bathing, etc., should be thoroughly carried out. The bowels should be kept regular and hot vaginal douches morning and night.

Usually these cases require great perseverance.

UTERINE TUMORS

All organized growths that occur within the uterine walls or are attached to any of its surfaces are properly called tumors. Several varieties exist—polypus, fibroid, fibro-cellular, vesicular, cellular or mucus, vascular and encysted. They are variously distinguished by position and relation to the different parts of the uterus.

Polypi are pendulous growths attached to some portion of the uterine mucous membrane by a narrow neck, varying in density and causing a variety of symptoms that depend to a considerable extent upon the seat of their attachment. When located within the

cavity of the uterus they are apt to derange menstruation, rendering it profuse, causing weakness, anemia, leucorrhoea, dragging pain; being out of reach they may not be detected for months and years. The neck may become elongated and the body be expelled outside the uterus where it hangs till removed by surgical means. They may occur in the canal and obstruct the menstrual flow, causing great pain and making the flow exceedingly profuse. In such position they can cause absolute sterility. They may be attached to the mouth of the uterus within easy reach.

Their only *treatment* is removal by surgical means.

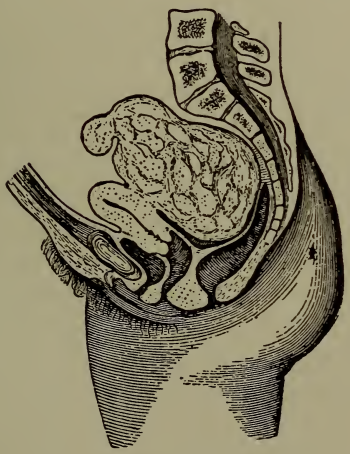


Figure 28

Fibroid tumors are by far the most frequent, difficult to manage and dangerous. They may occupy any part of the uterine substance, but are oftenest found in the posterior wall, (Fig. 28) and are generally round or oval in shape. The size varies very considerably.

Increasing the size and weight of the uterus, they cause displacement.

The great danger is from hemorrhage, which does not by any means bear a definite relation to the size of the tumor. The menstrual function is deranged, often with great pain and profuse flow, and the pressure of the tumor on the pelvic nerves frequently causes neuralgic pain and numbness. Constipation and irritability of bladder may occur. Sterility is likely to result, or if conception takes place abortion will be very likely to follow.

The diagnosis is not easy. Recurring hemorrhage causes suspicion of their presence, particularly if there be existing displacement. Careful manipulation is necessary, and the use of the sound will be required before a diagnosis is certain. Skill is needed to make certain the existence of the tumor, its location, etc.

The *treatment* of these affections is very difficult. To control hemorrhage is one of the first things to be considered. If we cannot cure we can prolong life. The removal of the tumor is the only way to effect a permanent cure. This is often very troublesome and in some cases impossible. A knowledge of the character, location and attachments of the growth are necessary before we can form an opinion of the success of the treatment or the plan to be pursued.

To arrest the hemorrhage, boldness and energy are often required. Give ten-grain doses of gallic acid in water and repeat every half hour; twenty drops of the oil of erigeron on sugar repeated every half hour; a strong tea of cinnamon, hemlock and witch hazel barks, given quite freely and often repeated; if the structure of the womb is soft, lax and flabby, teaspoonful

doses of the fluid extract of ergot repeated as often as necessary from twenty minutes to four hours are among the most prompt and convenient remedies. Keep the patient in a recumbent position, in a cool room, allow nothing but cold drinks, lower the head and elevate the pelvis.

Local measures must not be overlooked. When there is much leucorrhœa or bloody discharge, antiseptic vaginal douches should be used. A firm vaginal packing of antiseptic gauze or cotton, changed every day or two as necessary, will often prove an excellent means of controlling the bleeding for the time being. Astringent injections may be used; fill the vagina with cloths or cotton steeped in some astringent—alum or vinegar if nothing else is at hand. Be thorough, a life may be sacrificed by delay. Apply ice to the pelvis. A gum-elastic air bag, if at hand, may be introduced and inflated, completely plugging the passage and preventing the escape of the blood. Some of these means can always be employed while waiting for remedies administered internally to take effect.

Various plans have been advocated for the removal of these growths. If it is polypoid and in reach its removal may be effected by grasping with forceps and twisting its neck from its attachment, and dressing with astringents.

If the growth is of a mushroom character, growing from the mucous membrane, in which case bits like "proud flesh" may be expelled occasionally, the womb must be dilated and removal effected by instruments adapted to the purpose.

Fibroid and other tumors require surgical treatment. Electrolysis has been successful in some cases. The

injection of iodine and other substances into the tumor with an instrument invented for this special purpose has been employed. Various other means have been resorted to, but as all forms of them are attended with great difficulty and require patience and skill I need not detail their *modus operandi* here, as it is not expected their removal will be attempted by other than competent physicians.

Such various means as have already been recommended to build up and strengthen are always in order, among which acids are most appropriate, as they counteract the hemorrhagic tendency, to some extent.

CANCER

A consideration of this disease is of too much gravity to enter into a work intended for public guidance. The disease must be dealt with promptly and thoroughly,

Figure 29

if at all, and no one should tamper with it unless qualified by clinical experience and armed with the necessary means to carry out whatever procedure is determined upon.

Cancer of the womb occurs most frequently between the ages of forty and fifty. Frequent child bearing and tears or lacerations of the neck of the womb seem to predispose to cancer.

A consideration of the symptoms may, however, be appropriate, as they may induce some of the afflicted to seek proper relief before it is too late.

Hemorrhage is usually the first symptom. The occurrence of hemorrhage in a woman who has passed the change of life should always arouse suspicion of cancer. Discharges, pain and fetor are the symptoms that most generally attract attention; and when these three are present the case is most generally an advanced one. The pain is characteristic—lancinating, darting, twinging. The discharge consists of blood, limpid serum, minute sloughs. The blood and serum do not cause the fetor; it is the disintegration of the sloughs-cancer cells. In women who are still menstruating, the first discharge is the blood, then an increase of the menstrual flow, then blood between times—all from the mucus membrane of the uterus.

Later, however, when the hemorrhage is constant and is attended with fetor it is effused from the eroded vessels upon the ulcerated surface—in the one case the result of turgessence, in the other disintegration of tissue. Limpid, inoffensive serum is almost always observed, after the menstrual period, in women about the change of life, and very gradually this transparent

liquid becomes colored with blood; after a while it becomes fetid, etc.

Lancinating pain, sero-sanguineous discharge, peculiar fetor, persistently continuing for days and weeks, are distinctive of cancer. With these we have the peculiar constitutional condition known as the cancerous *cachexia*. Cancerous anæmia, with the straw-colored translucency of the skin known as the cancerous cachexia, with the impairment and failure of function in a long struggle with pain, loss of blood, anxiety and inaction, together with debility, indigestion, palpitation, restlessness, neuralgia, constipation in the early stages and colliquative diarrhœa in the latter, apthæ, night sweats, wandering of the mind, together with pain and exhausting discharges, are the destroying agencies.

As already stated, I will not advise as to treatment. I know of no specifics or anything approaching to them, but, do what you may, I beg of you to steer clear of cancer quacks and incompetent physicians.

CHANGE OF LIFE

After years of menstrual activity the woman undergoes another change and she ceases to menstruate. The age at which this occurs varies greatly. Forty-five is considered the average, but numerous cases occur in which it is continued for several years later. The cessation of this function is often attended with phenomena that demand attention, and while it often terminates the existence of previous illness it may also be the commencement of various afflictions.

In some parts of the country there is a sort of proverb that women who have previously been weakly become healthy and robust, while those who had before

been healthy and strong now become sickly. While in some the climateric change does not occasion any symptoms requiring attention, in others serious consequences develop that tax the skill and tact of the physician. Too often these phenomena are passed without attention or the symptoms are referred to as the "turn of life" and the woman told she must wait until this period has passed before she can expect to be better. Not only does this refer to the sympathetic phenomena arising from the arrest of a physiological function, but to pathological conditions that develop independently of it.

The suffering endured at this time is too often regarded as a sort of necessary affliction and is passed as a "must be," while the truth is, nothing is farther from right, for the more attention we give to the modification of symptoms, the arrest of disease and the preservation of the health at this time the greater will be the chances for the enjoyment of perfect health afterwards.

From fifteen to forty-five, sooner or later, according to the peculiar vivacity and vital stamina of the patient, she has menstruated regularly, and now the germ production has gone forever. There is no longer the monthly periods; the ovaries have ceased to produce germs; but, though this has happened, the affections of the soul have but matured; her power to love remains in full force and ardor, and also the desire and capacity for sexual enjoyment. Some women continue beautiful and attractive until they are seventy. The cessation of the menses at this period is a wise provision of nature, for if women went on producing offspring till a ripe old age the result would be a puny race. The generative power disappears as she passes the period of maturity, and women who have borne children have a compensation for their privations and cares.—*Buchanan.*

This period is ushered in in various ways. Menstruation seldom ceases all at once unless some accident occurs by which it is arrested. It usually becomes more or less irregular. It may recur too frequently or it may be delayed several weeks or even months and then return too profusely—perhaps be regular a few times and then cease altogether. There is usually lassitude, debility, headache, nervousness, aching in the back and limbs, flashes of heat, deranged secretions, dyspepsia, etc.

Temperament modifies symptoms materially, but hot flashes are present in nearly all cases. Plethora or anemia develops. The blood itself, no doubt, undergoes some change, a host of symptoms are present. She becomes fanciful, even hysterical; she imagines everything ails her, and this morbid imagination often leads to her neglect. That class of symptoms termed "nervous" prevails, producing an endless variety of phenomena, distressing to the patient and annoying to her family. Mental aberration often occurs. The patient suffers both mentally and physically.

The *treatment* for obvious reasons must be considerably varied. A wide range of conditions may be developed each of which may require to be met and subdued. Whatever function is deranged, whatever organ suffers, should receive attention. The hygienic measures already advised for various ills will contribute more or less to the establishment of a healthful condition.

Plethoric women suffer from rush of blood to the head, vertigo and frequent attacks of hemorrhage. They make blood too fast. They need spare diet,

exercise and, if the bowels are sluggish, saline cathartics, they bear purges well; then if the circulation is excited give veratrum, a drop of the fluid extract in water every hour or two. Such cases generally derive much benefit from bromide of potash in infusion of squaw vine; ten grains of the bromide in an ounce of the infusion three or four times a day is good treatment.

If anemia prevails, the blood gets impoverished, is thin and watery, is not manufactured fast enough to supply the waste, there will be headache, etc., etc., we must give tonics and nervines, and avoid excitement. An infusion of the squaw vine and ladies' slipper in tablespoonful doses three or four times a day is excellent; alternate with a good iron tonic.

If the bowels are irregular, the remedies already mentioned may be employed.

Displacements are often annoying, with all the rest.

The kidneys and skin most be kept active.

Dr. Dye's Mitchella Compound probably fills as many or more indications than any other remedy and suits nearly all cases. The range of probabilities being so great and complications so numerous my space will only admit of generalizing the treatment. Should cases arise that do not yield to these remedies I will advise more specifically. Yet if these directions are followed such necessity will seldom occur.

UTERINE STRICTURE

As a result of inflammatory disease, non-development or the improper use of caustic applications, the canal leading to the cavity of the uterus is sometimes narrowed to such an extent that it may cause the most terrible dysmenorrhœa on the one hand or absolute sterility on the other; the passage being too small to

allow the *exit* of the menstrual discharge or *admit* the sperm cells.

The consequences of this condition have already been alluded to in the consideration of sterility and mechanical dysmenorrhœa, and operate by closing the canal, though differently from flexion and polypi. The symptoms are very similar to those troubles, but can only be determined from them by a careful exploration.

The treatment consists in dilating the passage or in dividing the stricture.

Dilation usually succeeds temporarily, but is not apt to give permanent results, owing to the disposition of the stricture to contract again. Division when skillfully performed is more permanent. The operation is effected with instruments for the purpose, but requires great care after its performance to render it successful. If the incised surfaces are allowed to come in contact they are very apt to unite and render the trouble worse than before. The operation itself is accompanied with little danger, but must be attended to daily for some time or failure results. It should never be undertaken by anyone other than a qualified physician provided with all the necesary facilities for effectually executing all the various steps of the operation and the subsequent treatment.

VAGINISMUS

Professor Sims applied this name to a spasmodic sensitiveness of the vagina. It occasions in many cases the most intense agony when anything is brought in contact with it. The existence of such an impediment to the consummation of marriage often gives rise, and many times unjustly, to domestic unhappiness, jealousy, divorce or suicide. There is nothing

more certain than that the woman afflicted with it suffers exceedingly. It may exist in the unmarried or be developed after marriage. It is usually due to inflammation of the vagina, self abuse or to sexual debauchery. Tilt says:

> I have seldom known this state to exist except as a symptom of vaginitis or of chronic metritis; and, like Scanzoni, by treating these complaints I have been able to cure spasmodic stricture of the vagina. There is no doubt in my mind that in some of these cases the man is more at fault than his mate.

A complete discussion of the subject, however, is scarcely appropriate in a work of this kind. I will, however, on application by the afflicted, explain the matter, more fully and advise as the case presenting may demand.

Tilt, Sims, Hood and many others have resorted to forcible instrumental dilatation to overcome the trouble, applying it under anesthesia.

The first step seems to be to ascertain if there be inflammation present and if so, cure it, when the morbid sensitiveness will usually yield. There is no need of the suffering experienced from such cases, for it will yield to proper treatment; but for the reasons mentioned above I will refrain from further discussion of the subject.

THE OVARIES

Situated in the cavity of the pelvis at either side of the uterus, communicating with it through the fallopian tubes, are two small organs, analogous to the *testes* in the male, called the ovaries. In them the germ cells are developed and when matured are passed through the fallopian tubes to the uterus and unless arrested there are expelled. The completion of this

process occasions the phenomena of menstruation. If, however, the sperm cells of the male come in contact with the germ cell under favorable circumstances during some part of the passage from the ovary to the womb conception occurs.

It is truly wonderful the influence these little organs exert upon the life and happiness of woman. An author in endeavoring to illustrate their importance has said:

> It would seem as if the Almighty had taken two ovaries and built up a human being around them.

These organs are liable to congestion, inflammation, neuralgia, enlargement, displacement, or may be the seat of tumors that grow to enormous size. They are influenced by colds, self-abuse, sexual excesses, uterine disease and displacements.

Either as a cause or effect, the ovaries in women who suffer from derangement of menstruation become swollen, painful and tender. They can often be felt when swollen, except the woman be fleshy, through the walls of the abdomen, inside and just below the points of the hips.

The congestion often gives rise to the most intense pain, not infrequently causing spasms, hysterical phenomena, etc. Menstruation may be deranged and is apt to be profuse, the sufferer becomes weak, anemic, nervous, fretful. Sexual debauchery predisposes to these troubles and is often the cause of the most intense neuralgia. Women of nervous temperament are most subject to these affections. I have seen the most troublesome menstrual disorders occasioned by congested ovaries; the menses were profuse and recurred every two weeks, resisting all treatment until the cause

was discovered and treatment addressed to its removal. Usually one ovary is affected, though both may be. The congestion may persist for a long time, being worse just before menstruation, disappearing after the flow has well begun, to reappear again at the next period. The location of the pain and soreness will usually be sufficient to indicate the trouble.

Begin a week before the expected trouble and take a teaspoonful three times a day of the following:

Tincture Belladonna, . .	5 drops
Water, ...	4 ounces

Mix. At the period it may be taken every two hours.

In the interval, measures to improve the general health and the avoidance of all sexual excitement; sitz baths, outdoor exercise and the following:

Bromide of Ammonia, . .	4 drams
Quinine, ...	30 grains
Tincture Cinchona Compound, .	1 ounce
Syrup of Orange, . . .	3 ounces

Dose—A teaspoonful three times a day.

In inflammation of the ovaries there will be fever ushered in with chills, pain in the ovarian pulse, restlessness and general symptoms of inflammation.

Rest quietly in bed, keep bowels open with Epsom salts and apply mustard, followed by hot applications to the abdomen, and hot foot baths. Then give:

Tincture of Aconite, . .	10 drops
Tincture of Gelseminum, . .	10 drops
Water, ...	4 ounces

Mix. Dose—A teaspoonful every two or three hours.

If it occurs at the time when menstruation should appear, let an infusion of *serpentaria* or Virginia snake root as it is generally called be drank. It will usually

cause sweating. It may be combined with motherwort in a small quantity. At the same time alternate the fever mixture above mentioned with drop doses of pulsatilla every two hours.

If an abscess forms, the ovary should be removed without unnecessary delay.

A consideration of *ovarian tumors* in a work of this kind could be of no use to the general reader and will be omitted.

SMALL AND SHRUNKEN BREASTS

Next to facial beauty does woman pride herself on a proper development of her breasts. If too large or too small they render her figure imperfect and materially impair her attractiveness.

Not only is perfection here essential to beauty and happiness, but it is also necessary for the perfect performance of that function to which all true women aspire—maternity.

But, alas! these organs so doubly essential to the health, happiness and usefulness of women are prone to disease. They may be arrested in their development or, after having been developed, they may undergo retrograde metamorphosis and become shrunken, shrivelled, unsightly; development may proceed so far that they become too large and burdensome. They are often the seat of tumors, cancers, etc. Again, they are liable to inflammation and abscesses.

Any departure from a natural size and firmness constitutes a disease, and may as appropriately be regarded so and subjected to proper treatment as any other organs that more intimately influence the processes of life.

The breasts are properly to be considered as a part of the reproductive system, and menstrual and uterine diseases are often manifested by diseases of the breasts. In fact, uterine disease is in a large proportion of cases manifested by wasting of the breasts.

Atrophy or non-development of the breasts, like other diseases, admits of a cure, and women whose forms are imperfect and who habitually resort to artificial means can have the defect overcome by a proper course of treatment. The cause must be considered and the relation of the wasting to the other diseases must be studied and such treatment devised as shall bring about the most perfect state of the general health, then remedies to increase the nutrition and cell development locally will succeed in all cases.

The matter has received much attention during the past few years, and several remedies have been found that exert an efficient curative influence over this condition. I will, however, omit explaining them, because were I to do so it would open a field for quacks to operate in, who would take advantage of woman's desires to be attractive and flood the country with nostrums that would necessarily disappoint as many or more than were gratified. There are no specifics. We must consider conditions present and apply the remedies in accordance with those physiological and therapeutic laws that govern scientific treatment in other diseases. Any woman wishing further information on this subject should write to Dr. Dye's Medical Institute without delay.

CANCER OF BREAST

The strong disposition of cancerous disease to locate in the female breast, necessarily causes alarm at the

discovery of any bunch or tumor in this locality. The diagnosis is not easy except when the disease is well advanced, and physicians often find it difficult to distinguish between benign and malignant tumors. A few points, therefore, may not be amiss. The form of cancer found here is generally very hard and is frequently called stone cancer in common parlance, while in professional language it is *scirrhus*. It is very hard, knotty to the feel, there is darting, gnawing, lancinating pain, and when well advanced becomes immovable, the surface discolored, the nipple drawn backward into the mass, the glands in the armpit enlarge and the whole complexion gradually develops that peculiar waxy, sallow hue known as the cancerous cachexy. On the other hand, benign tumors do not present these characters, but may become much larger than a real cancer.

The treatment is surgical—extirpation—and should be resorted to before the whole system is impregnated with cancer cells. If there is no pain or soreness, take time and do not be scared into doing what will do no good. If it presents the characteristics of cancer, early removal is advisable.

The consideration of cancer, however, is not within the intention of this work, and though my space has necessitated the curtailment of many subjects it is the earnest hope of the author that the hints expressed will point many who are in search of health to the recovery of that desirable boon.

CHAPTER XVII

STERILITY

In obedience to a Divine mandate it is natural for woman to yearn for motherhood, for it is the ideal state of every woman who has not already arrived there. Although it is not uncommon to meet young married women who wish to defer the assumption of maternal responsibilities for a time, there are few women indeed who will voluntarily pursue life's journey without the companionship of one or more of those little blessings to enliven her sympathies and increase her enjoyment in the noonday of life and to comfort her declining years.

Marriage is the consummation of love; yet without offspring its object is but half attained. The coming of children strengthens the ties already existing between man and wife and renders happy and harmonious lives that would otherwise be passed in estrangement and discord.

The yearning of the wife's heart for children is a natural instinct that is largely shared by the husband. Although they may conceal their desires from one another, and even publicly assert that they entertain an intense hatred for children, in the privacy of the

professional consultation confessions are made which prove that nature is true to herself.

With many females the grave is looked forward to with more cheerfulness than a childless longevity, and not a few husbands would rather die in the prime of manhood and leave an heir than to live to gray old age and be considered incapable of reproduction.

So great is the regard of offspring by both husband and wife (and I do not consider it a betrayal of professional confidence when I assert that I am very often consulted on the subject either in person or by letter), the question is often asked by both male and female, "Am I capable of becoming a parent?". and when disappointed in the realization of their desires, though perhaps charging the fault upon the other, they secretly and without the knowledge of the other seek professional advice and remedy. In other cases both parties seek advice together, hoping by so doing that the true cause of the barrenness may be ascertained and the proper remedy obtained.

There are very few subjects that give men or women more anxiety than this, for to go through life with the self-consciousness of procreative inability is indeed a source of very great unhappiness. Quacks have taken advantage of this and made the subject the basis of numerous "Marriage Guides," in which the authors have sought to impress the unmarried with a belief in their own incompetency in order to wring from them large sums of money for pretended restoration.

According to the observations made by English investigators nearly one married woman in eight is barren. Barrenness, however, cannot be considered as absolute, even without interference, for it is known that

women who have borne children may become sterile, while on the other hand women who have been sterile for years subsequently become fertile. It has not, however, transpired in the course of these investigations how far the sterility may be the fault of the husband. Nor is it likely that such an inquiry can ever receive more than an approximate answer, for the very reason that people will never consent to have their private matters become public property to the extent necessary to form a close estimate, based upon statistics.

Having made chronic diseases of the reproductive functions of both sexes a specialty for years I trust I may be pardoned for saying that the subject of procreation concerns gentlemen far more than is generally supposed.

In connection with the subject of sterility it may not be any breach of professional confidence when I say that the extensive prevalence of sexual abuses and excesses of the young, and even of the middle-aged, render them liable to certain disorders which so intimately concern the married state that I am consulted daily either in person or by letter by both sexes as to the propriety of marriage. I mention the matter here to illustrate the causes of sterility as being sometimes the husband's fault, for which the wife is generally blamed. If the male party to a marriage contract has by vices and pernicious practices despoiled his manhood and finds the union unhappy or unproductive in consequence, it is fully as proper that he seek professional assistance as for the wife to bear the odium of barrenness. Happily, I am able to offer those who consult me in these matters very decided assistance, these

disabilities being for the most part amenable to proper treatment.

The average time elapsing between marriage and the first child is about seventeen months. The first three years may be permitted to lapse before the woman can practically consider herself sterile, though if she has not made use of any preventive during that length of time and conception has not occurred the chances are as thirteen to one against her, for she will be likely to remain unfruitful except she receive assistance from art.

In considering this subject it is to be remembered that it does not always follow because a marriage is fruitless the wife is to blame; nor does it follow because a woman has not borne living children that she is always sterile; not is it certain that if she is barren the first few years of married life that she will never have children. Women sometimes become fecund after years of sterility. The mother of Louis XIV was sterile for twenty-two years before his birth; the wife of Henry II became the mother of ten children after a period of ten years of barrenness. Dr. Tilt, of England, mentions a case of a healthy woman who had married a healthy man at eighteen, but did not bear a child until she was forty-eight. Numerous instances are on record where a marriage has been unproductive, divorce followed with subsequent marriage of the man and wife to another woman and man, respectively, and the subsequent unions were blessed with offspring.

The causes of sterility are various, and in a very large per cent of cases can be remedied. A careful investigation of each individual case will usually reveal the cause of sterility, so that I can point out the indications of cure.

Among the causes most frequently met are the following:

Chronic inflammation of the neck or body of the womb, stricture of the neck of the womb, flexure or elongation of the neck of the womb, tumors, growths, polypi or other obstructions of the neck of the womb, displacements, uterine tumors, ovarian diseases, profuse and acrid vaginal secretions, uterine catarrh, leucorrhoea, imperforate hymen, sexual excesses, uterine and ovarian debility, membraneous dysmenorrhoea, menstrual derangements, sexual frigidity, nursing, late marriages, disease of husband causing imperfect development of spermatozoa, temperamental incompatibility, imperfect development of the womb and ovaries, displacement of the ovaries, stricture of the fallopian tubes, adhesion of the fimbriated extremity of the fallopian tubes, etc., etc.

From this list of causes it will be readily inferred that with the exception of the last three or four, all are amenable to treatment when properly understood, because they are dependent upon conditions which the best authorities of the present unite in declaring curable.

Formerly, the causes of sterility were shrouded in mystery, and the treatment speculative and empirical, but light has been let in upon the subject by modern investigators, and barrenness is now known to be occasioned by certain conditions capable of removal. Much of what is known of the diagnosis and treatment is due to the labors of Drs. Sims, Thomas, Emmet and a few others who have stripped the subject of its mystery and made the treatment more than a mere matter of conjecture and guesswork.

It will be seen that a very large per cent of these causes act in a purely mechanical manner by preventing the entrance of the spermatozoa into the womb or beyond it, where it may by uniting with the germ cell occasion conception. Numerous theories have been advanced as to the manner in which conception takes place.

It is now understood that the sperm cell of the male and the germ of the female must come in contact before it can occur, and that this union must occur beyond the mouth of the uterus and under certain conditions. How these cells influence each other is not at present definitely known, but upon their union the germ acquires a disposition to unite itself to some tissue from which it may receive nourishment and support. The tissue which is most favorable for this purpose is the lining of the cavity of the womb, though it sometimes occurs in the fallopian tubes or at the ovary.

The cavity of the uterus appears to be the most favorably designed for the reception, protection and development of the fecundated germ, and the question seems settled that the sperm cell—the spermatozoon—*must* penetrate the reproductive passages of the female as far as this cavity, or fecundation cannot take place. So far as I have been able to ascertain no instances are recorded where conception has taken place between the cavity of the uterus and the external generative organs.

So far as the penetration of spermatozoa to the cavity of the uterus is concerned it is entirely mechanical and may occur without the female experiencing any of the sensations due to the generative act whatever, although recent developments show beyond a doubt, such experience on her part favors such penetration.

Instances have been known in which the spermatozoa have penetrated the uterine cavity and passed through the fallopian tubes to the ovary, but it is not satisfactorily determined that it must always be so in order that conception occur. After the union of these two infinitesimal cells has taken place, certain other favorable conditions are necessary to their development, and it is upon these conditions that the success of the impregnation depends. If the sperm cells are unhealthy or imperfectly developed, although the maternal parts are prepared for their reception, their death instead of their development will occur. If the interior of the womb is in an unhealthy condition the fecundated germ may be unable to effect its adhesion and consequently be thrown off.

Recent authors claim that a catarrhal condition of the lining membrane of the womb is to a very great extent to blame for all the cases of sterility not due to mechanical obstruction. Chronic inflammation of the mucous membrane will always be associated with a catarrhal discharge. The membrane being bathed in a secretion of its own mucus, while it may not destroy the germs by any poisonous qualities, prevents their lodgement and nutrition, and thus effectually prevents conception. If the ovaries are diseased, the germ cells may not be able to maintain life and perform their part. Thus failure may be due to some defect in the sperm cell, in the germ cell or in the condition of the uterus.

In addition, disciples of the electro-magnetic and the temperamental doctrines would have us believe that the failure may be due to defective magnetic

conditions, temperamental incompatibilities, etc., which perhaps even they themselves cannot clearly explain.

Among the causes of sterility, doubtless the most important are those which oppose the entrance of the spermatozoa into the uterine cavity where conception can take place; these are anything that obstructs the uterine canal, and may exist before a child has been born, or may be acquired afterward; thus, imperforate hymen, displacements, tumors, polypi, granulations or other growths within the neck of the womb, angular curvature of the uterine neck, stricture of the same and chronic inflammation, to which might be added, technically, occlusion of the mouth of the womb.

Imperforate hymen, as anyone who will consult a work on anatomy will readily see, necessarily prevents the entrance of the spermatozoa; indeed, it does not permit them to even reach the mouth of the womb at all. At one time the hymen was considered as the test of virginity, but, thanks to the enlightenment of the present, it is no longer so. There are many ways in which this membrane may be ruptured without in the least compromising the virginity of the female. It may be ruptured by the use of a female syringe which every female who respects cleanliness will use, occasionally at least. It may be so fragile as to be ruptured by the menstrual flow and in other ways; while on the other hand it may be so powerfully developed that all attempts at copulation will be futile. There may be a small orifice through which the menses may escape and through which it is possible the spermatozoa may enter, but not probable. When this is the case, nothing short of a surgical operation will suffice for its removal.

On the one hand the woman is blamed if this exceedingly uncertain test of chastity does not exist, and on the other she will be blamed for the sterility its excessive development occasions. In the first place, none but the ignorant, prejudiced and exacting will be disappointed if it does not exist. In the second, a professional consultation will allay any unhappiness and anxiety. Let our readers bear in mind that in medical jurisprudence the presence of this membrane is not an absolute proof of chastity, nor does its absence prove immorality.

Uterine displacements may occasion sterility. The manner in which they operate is either to turn the mouth of the uterus in such a direction that the spermatozoa cannot reach it, which might be the case in *anteversion*, a displacement in which the body of the uterus is tipped forward and downward and the neck and mouth carried upward and backward, the central attachment acting as a pivot upon which the uterus very nearly turns bottom upward by tipping forward. This condition is usually associated with more or less trouble with the bladder and is exceedingly difficult to cure, mechanical means being usually essential to success. In *retroversion* the uterus tips backward instead of forward, the body of the organ falling backward into the hollow of the sacrum, while its mouth is carried forward and upward behind the bladder, turning the mouth persistently away from the spermatozoa. By the pressure of the uterus in this condition upon the lower bowel, constipation and backache are occasioned. This form of displacement is more frequently met than anteversion. It may be cured by mechanical measures to overcome the mal-position and the employment of

remedial agents to so tone its supports that the natural position may be maintained. Very often this displacement is associated with an enlargement and increase in weight of the organ which must be overcome before a permanent cure can be expected. These mal-positions very often result in sterility.

Another form of displacement known as prolapsus or falling of the womb is often a cause of barrenness. In such cases the mouth of the uterus often rests upon the floor of the pelvis and is buried in the soft tissues covering the perineum or vaginal walls which form as it were by the pressure a complete covering for the mouth of the womb, preventing the entrance of anything. To overcome this trouble has taxed the ingenuity of the profession for years. In such cases there are a great variety of symptoms, sympathetic disturbance, etc. The indications of cure are to reduce the increased weight of the organ, replace it and, by increasing the power of its supports or otherwise, maintain the proper position. This is often difficult to do and we often hear a physician saying, "If you could only have a child it would cure you." The truth of it is, if they could only cure the patient she would be very apt to have a child. We cannot in the space allowed this subject consider the methods of cure, nor would many be likely to succeed without professional assistance. Artificial supporters are necessary in many cases, while in others they make the trouble worse and are so painful that no woman can wear them.

Tumors, growths, etc., when occurring in the uterine neck, form a mechanical obstruction to the entrance of the spermatozoa and, as conception cannot occur in the vagina, they become efficient causes of sterility.

By blocking up the canal of the uterus they interfere with the escape of the menstrual flow, causing severe pain at the menstrual period and, by modifying this function, are often the cause of profuse hemorrhage. A careful examination is necessary in order to correctly diagnose the nature of the trouble. On the introduction of a speculum the trouble may be at once apparent or it may require the dilatation of the uterine mouth and neck before the source of trouble becomes visible. Very often the morbid growth will be so small as to escape notice, yet it is a very efficient source of trouble. The growths most frequently met with are granulations, or polypi, though tumors may be present.

The measures to be employed for their removal necessarily vary with the nature of the growth, size, location, etc., etc. Granulations and small polypi will usually disappear with appropriate treatment, and large polypi may be removed by forceps, snare, ligature or scissors. Hemorrhage may be troublesome, but usually in the hands of one who understands his business there will be little trouble or pain in their removal. The removal of tumors may be effected with a knife, ligature, caustic, injection or electricity. No one but a skillful surgeon has any business to touch them. When either of these troubles has caused sterility, their removal will be likely to be followed by conception.

It may be proper to place in this division another form of abnormal development that is sometimes met as a cause of barrenness. It is when the posterior lip of the uterine mouth is unnaturally long and folds over the entrance of the womb like a valve, forming an effectual barrier against the entrance of anything into the

womb, but is no impediment to the escape of the menstrual flow. Such a condition might pass entirely unnoticed because it would not be attended by any other troubles that would be likely to lead to its recognition, and unless the female came under examination to ascertain the cause of her sterility it would probably never be known, and even then unless the examiner was on his guard it might easily escape detection. This cause can be easily remedied by a surgical operation.

Curvature of the neck of the womb is a fruitful cause of sterility and is a frequent source of painful menstruation. The body of the womb may be bent upon its neck in such a manner as to obstruct the canal sufficiently to prevent the entrance of spermatozoa or exit of menstrual matters in the same way that a finger of a glove may be bent as to prevent the passage of even water. The curvature may be so great that the axes of the neck and body of the womb will intersect at nearly right angles. Take a hollow tube and bend it upon itself to a right angle, or even an obtuse angle, and you have a good illustration. When the curvature is forward it is called "anteflexion"; if backward "retroflexion"; if sideways "Lateral-curvature". These deviations from normal position are often more easily recognized than cured.

Several forms of treatment are in vogue, one of which is to cut or divide one side of the neck, before or behind according to the flexion, in order to establish a straight and free passage. When properly performed it is generally successful. It is not very painful, though there may be some hemorrhage. The subsequent treatment must be thorough, or the divided portions may unite and leave it worse than before. Another plan is

to dilate the neck of the womb and introduce an instrument that will hold it straight until the curvature is effectually overcome. Uterine supporters are also employed, but the surgical treatment is by far the most successful, though the dislike many entertain for the knife will often lead to a trial of the other measures. Many cases are recorded in which the successful treatment of curvature by one or the other of these methods has been followed by a realization of the highest hopes—a child!

Stricture causes sterility in a manner very similar to curvature, the uterine canal being narrowed by constriction so as to prevent the easy passage of the menses from within or spermatozoa from without. An examination by the touch or by speculum will often reveal nothing, but when an attempt is made to introduce a uterine sound, the trouble becomes apparent. This trouble is therefore very often overlooked and the sterility attributed to other causes. There is very little excuse, however, for overlooking this condition when a thorough investigation is being made.

The treatment of this difficulty consists in permanently enlarging the canal, which may be done either by stretching or dilating it with steel dilators, or by a single or double incision. The operation of dilating should be thorough, so that there may be no tendency to return to the previous condition. The incision, performed in much the same manner as for curvature and properly attended until the incised surface has healed up, is almost always successful and occasions little pain, though the woman must remain in bed a few days. There are few cases but that remain permanent if the operation has been made with the requisite

amount of skill. The performance of this operation and the frequency with which it has been followed by conception, as well as relief from the most intense sufferings at the menstrual period, reflects very great credit upon the name of Dr. J. Marion Sims.

Elongation of the neck of the womb is also a source of barrenness and painful menstruation, and its successful amputation has been effected. When the neck is unusually long there is generally a corresponding narrowness, and the treatment is made for the purpose of enlarging the canal to facilitate the passage of the spermatozoa. It makes little difference, in the result, which of the operations, as for stricture, are made, if properly performed, but, of course, skill will be necessary and no one must attempt it without a clear understanding and the requisite facilities.

Occlusion, by which a complete closure of the neck of the womb is meant, may be due to congenital malformation, or to ulceration which in healing has resulted in uniting the edges in such a manner as to completely obliterate the canal. The improper use of caustics may also produce this result, and nothing can enter the uterus nor escape from its cavity. Such a condition will be far more likely to demand interference on account of the trouble arising from the retention of the menstrual discharge than for the relief of sterility. The establishment of an artificial opening by surgical means is necessary and gives speedy relief. Such cases are rare.

Chronic inflammation may be confined to the neck of the womb, to the body or to both, and may involve only the mucus membrane lining, or extend to deeper structures. It is a frequent affliction of civilized women.

and on account of its frequency becomes one of the fruitful causes of barrenness. An endless variety of symptoms accompany this ailment which are not only referred to the reproductive organs but, through, sympathy, may extend to every part of the body. This ailment is not an absolute preventive of conception, but it is not very probable that the woman that is afflicted with it will bear children.

In this trouble the neck of the womb may be much larger than natural and the membrane very much relaxed; but there will be formed in the neck a plug of thick, tenacious mucus so completely filling the canal that it constitutes a mechanical barrier to the entrance of the spermatozoa. When this is not the case it will be so acid as to destroy the vitality of the spermatozoa and the sterility is as certain as if they did not reach the locality at all. I have known many physicians to fall into error in the matter because they were misled about the possibility of the mechanical impediment when the canal was so much larger than normal.

A cure of this ailment is essential to the fruitfulness of the female and can be effected by a proper and persistent course of treatment, but to give a course of treatment so that it would be available would require more space than is at our present disposal, and the patient is referred to works on the subject. Constitutional treatment alone will not always be successful, and local measures are often demanded. The internal employment of Dr. Dye's Mitchella Compound already mentioned may succeed and is worth a trial. Its effect may be aided by injections, more particularly for cleanliness, and the use of pieces of cotton batting, saturated with glycerine and placed against the neck of the womb.

The action of the glycerine is to set up a drainage of the watery elements of blood contained in the minute blood vessels of the uterine neck and thus relieve the turgescence and stagnation. They are to be repeated daily or at least every other day for a considerable time, but omitted at menstruation. Medicating the glycerine with one eighth part of tincture of iodine, golden seal, calendula, etc., sometimes increases the efficacy.

It is scarcely necessary to allude to malformations or anatomical defects other than those already considered, for the public are aware of their influence on fecundity. Some may, however, be remedied by surgical means, and we would urge all women whose happiness depends upon their anatomical perfection not to be discouraged until they have consulted some good surgeon. It would be the part of wisdom, however, when a malformation exists not to enter matrimony until a surgeon has been consulted.

The foregoing causes of sterility are mechanical in their operation and the removal of the cause by medical or surgical means will usually be followed by relief of the maternal disability. Should the sterility continue more than two years after the removal of any of the causes already considered, some other cause will have to be sought, among which the most frequent are the following:

Acrid vaginal discharges, membraneous dysmenorrhœa, menstrual derangements, uterine and ovarian debility, sexual excesses, sexual apathy, ovarian disease, late marriages, imperfect development of ovaries, displacement of ovaries, stricture of fallopian tubes,

temperamental incompatibility, disease of husband, nursing, etc., etc.

Acrid vaginal discharges prevent conception by destroying the spermatozoa before they reach the germ cell. Usually this trouble will be considered as leucorrhœa and properly enough so, yet experts assure us that some forms of leucorrhœa, or "whites," do not cause barrenness, while others do. Facts of the kind are within the knowledge of nearly every observing person. The leucorrhœal secretion is not always the same, but admits of a great variety of modifications, and some forms are so very acid that they are as destructive to cell life as a solution prepared in the laboratory of a chemist could be. In such cases, particularly if long continued, there will usually be soreness of the parts caused by the corrosive character of this discharge.

While a cure is always desirable it is not always so easily effected. A lotion of permanganate of potash, ten grains in a pint of water, used freely, is very valuable; still there may be constitutional troubles on which the discharge depends that will need attention as well as the local trouble. The sepia of the homeopathic school I have found exceedingly valuable in such cases as an internal remedy. Locally, a great variety of remedies have been employed, but as it is only as a cause of sterility we are considering it we may say that if the spermatozoa can escape the deadly influence of this secretion and enter the uterus, conception may be effected. The use of injections before the sexual act, to remove as much as possible of this secretion, will increase the probability of success, and if after the use of an injection of warm water, which is made for

the purpose of cleanliness, an injection of milk is used, the probabilities of success are enhanced, the object being to protect the male element in its passage to the womb by removing the vaginal secretions or by rendering them harmless.

Membraneous dysmenorrhœa is that form of painful menstruation in which the flow is expelled with shreds of tough membrane, or perhaps with complete casts of the interior of the uterus. Although it does not always cause barrenness, it is likely to do so. Its pathology is not well understood. It causes sterility by preventing the united sperm and germ cells from securing an attachment to the walls of the uterus so that development can occur or carries them away with it when it is expelled. It is difficult to cure. When conception does occur it must take place soon after menstruation. It may exist in the single. When the disease is removed, among the married, pregnancy results. It has been thought that pregnancy would cure it, but instances have come to knowledge where the women had borne more than one child and still did not get relief from this trouble.

Menstrual derangements usually cause sterility, particularly when the flow is profuse, by washing away the impregnated ovum. When there is menstrual derangement, a functional disease of the womb or a disease of the ovary is apt to co-exist, which may prevent the perfect development of the germ cells and thus cause the union of the male and female elements to be futile. The use of Dr. Dye's Mitchella Compound will be found of great value in these cases. Rectify the derangement and pregnancy may then occur. There is a plant known as *senecio aurens*, or life root, which

may be used with Mitchella Compound in infusion or syrup. Sometimes the derangement results from a low grade of vitality on the part of the woman, and when such is the case the preparations of iron are of value. If from congestion with dragging down, aching, etc., the use of small doses of belladonna may so far overcome it as to favor conception. Fifteen drops of the homeopathic tincture in four ounces of water and a teaspoonful taken every four or five hours often succeeds in overcoming this latter condition.

Uterine and ovarian debility causes sterility by imperfectly developing the germ cells or by imperfectly nourishing them after they are fecundated. Where there is no constitutional debility we may attribute the sterility to purely local debility or inertia. In case there is constitutional debility a course of tonics are proper. Iron, squaw vine, life root, quinine, nux vomica, etc., in proper doses will often be followed by the desired results. In case of a purely local inertia or debility, the use of electricity, passing the current through the body from the lower part of the back to the point over the pubes, may succeed. The use of an electrical current passed into the uterus by one pole of the battery being introduced into it, the other over the back, is sometimes successful, and so is the application of a strong child to her breasts. There is a sympathy between the breasts and womb and ovaries, and by the reflex influence the natural function is so acted upon that conception at that time may be effected.

Sexual excesses exhaust the vitality of both parties to such an extent that the germ and sperm cells may not be sufficiently viable to perform their part in reproduction. By a wise provision of nature such devitalized

elements are frequently unproductive, and it is well that it is so. The remedy lies in modifying the indulgences to a frequency consistent with vitality, correcting the debility with a judicious course of tonic medicines and, if necessary, such a course of local treatment as has been advised under the preceding section—electricity, cold bathing, sea bathing, etc.

Sexual apathy, while not an absolute cause of sterility, may properly be considered as one of them. Many women bear children who do not experience the least sexual desire; yet others are barren on that account. When such is the case, an inquiry into the causes of the sexual apathy is necessary and the case treated according to such indications as may be rendered apparent by the investigation. The fact that sterility is not always caused by the absence of sexual senses leads us to the presumption that it is only in certain forms of this condition that sterility results, consequently the course of treatment selected will have to be dependent upon the cause. The use of tonics, electricity, injections of stimulating substances, as ammonia (weak), tincture of myrrh, etc., are sometimes valuable, as is the internal administration of musk, phosphorus, iron, quinine, etc., in proper doses, which may be determined from any work on *Materia Medica*.

Ovarian diseases prevent conception by preventing the development of the germ cells entirely, or by causing them to be so imperfectly developed that they cannot perform their part. The consideration of diseases of this kind is not within the scope of this work, while displacement of the ovaries, their imperfect development, together with stricture of the fallopian tubes, are of such a nature that a consideration of

them would be of no value to the sterile woman, for nothing she can do will be likely to afford her relief, and we must refer them to those who make such ailments a specialty.

The period of the greatest fecundity occurs on an average between the ages of twenty and twenty-four, and the farther the latter period has passed without the woman becoming a mother, the greater are the chances that she never will be thus favored. This is more particularly the case where no organic disease of the womb or ovaries exists as the prime cause. There are very many notable exceptions to this rule, and if some other cause may not be determined we would not advise the woman to be discouraged, for possibly nature may bring about some mysterious (?) change that will result in her maternity. Horseback exercise has sometimes been beneficial in these cases, particularly when carried to excess. Just before or a few days after the menstrual period conception is most apt to occur, particularly if total abstinence is practiced in the interval.

Nursing is a *fruitful* cause of *unfruitfulness*, though not absolutely certain, for instances are constantly coming under observation in which conception occurs during nursing. It is supposed the reason is because the vitality of the woman is expended in supporting the child at the breast, by the secretion of the milk, during which time the ovarian and uterine function is suspended. After weaning, conception is very likely to occur, particularly if the mother has not seriously deteriorated in health.

Very often the woman is blamed for unfruitfulness when she is entirely innocent and the husband is the

real culprit. Knowing as I do the extensive prevalence of self-abuse and its ruinous consequences on not only the reproductive organs but the general system, I can easily understand how the spermatozoa may be so defective that they cannot impregnate the germ cells of the woman, no matter how perfectly developed and matured these may be. The seminal fluid of the male does not always contain perfect spermatozoa, and if no good cause can be assigned for the sterility on the part of the wife it is well to inquire into the condition of the husband before the wife is subjected to censure.

The husband may have had some disease at some time of his life that has impaired the functions of the testicles, or he may have done so by leading a lecherous life, and I am satisfied after years of experience in the treatment of these affections that many a wife has been unjustly blamed in the matter.

Temperamental incompatibility is a cause often mentioned and, while it is possible, it is too little understood to be very often considered in the question of reproduction farther than to the inheritance of peculiar constitutions; electro-positive and electro-negative conditions are essential to the harmony and procreative success of a matrimony. It may appear a little far-fetched, when we consider that the polarity of organs or bodies may be more or less modified or changed by circumstances, excitement, etc., yet an inquiry into the causes of sterility could not very well evade its consideration, and if both parents are similar in temperamental and magnetic qualities they may be unfruitful, while the same parties united to others would be fertile.

No better illustration of this subject is needed than the well-known one of the first Napoleon and Josephine. She had had children in her first marriage; he became a father in his second. True, there may arise a question of Josephine's fertility with another husband at the time—a question that will no doubt always remain open. It is, nevertheless, a recognizable fact that certain parties are illy adapted to each other, socially at least, and though the question of temperaments has furnished a fine field for quackery, but little as yet is definitely known of it as a cause of sterility. There are many questions that rise before me as I write, but their consideration might lead in some cases to domestic infelicity without doing much to unravel the mystery, and it is best that its consideration be made the subject of a private consultation in which all the peculiarities of the individual concerned may be considered, or submitted to those who delight in such metaphysical (?) inquiries.

The question of temperaments, however, is one that should receive attention from marriageable people even aside from its influence on fertility and the fruitfulness of the union. It is easy enough to follow the subject in the divisions laid down by those who have made the study a specialty, and to say who are best adapted to each other, but to carry the question to a consideration of sterility is extremely difficult, because there may be circumstances connected with the sexual life of a husband and wife, before or after marriage, that no inquiry except made in individual consultation would reveal, and I must confess that the subject in the present state of society seems a very *unproductive* one.

We have already considered the most frequent causes of barrenness and pointed out the indications for their removal, many of which we are sorry to acknowledge cannot be carried out wholly by the woman herself.

In the treatment it may sometimes be found that after the removal of some cause the sterility will continue. When this is the case some other cause must be sought, for it so happens that occasionally a combination of causes may exist. The researches of Dr. Sims have shown that for the most part the causes of sterility are mechanical, and that the removal of the mechanical cause is followed by pregnancy in a large proportion of cases. It has been my endeavor to show the barren woman the operation of those causes and to point out others which may offer an opposition to her happiness. There are, however, still others which do not admit of any general classification, but they are not very frequent, and it is presumed that they operate remotely rather than by being causes within themselves. Of these we may mention season, climate, social position, sexual relations, etc.

It is claimed that spring is the most favorable season for fecundity. Climate no doubt has much to do with fecundity and barrenness, but it is no doubt due to the influence it exerts upon the general health, though it is said that the southern climate is more favorable than the northern. Perhaps this may be accounted for by the difference of the sexual dispositions of those who live in the different climates. Sterile women traveling with their husbands, sometimes find that an ocean voyage, or a trip to some other climate, so modifies and improves their general health that it ultimates in their

becoming mothers. Social position no doubt has something to do with fecundity, and without making any inquiry into the sexual relations of the rich and poor, I will state that women who live in luxury and fashion are not so prolific as their poorer sisters. Those who are in the best circumstances to care for large families rarely have as many children as those who find it difficult to provide for them. It is said that in Belgium the higher the price of bread the greater the number of children, and the greater the infant mortality. In another chapter allusion has been made to the greater prevalence of uterine disease among wealthy ladies in proportion to their numbers, which may partially account for the difference in the size of families. On the other hand, many weak and feeble women have a numerous progeny.

Sexual relations no doubt exert a greater influence upon fecundity, fertility and sterility than is generally supposed, and this is not only in relation to the relative conditions of health, but also to the other relations married people sustain to each other. The subject, however, is one which, while the reader might be specially desirous of understanding, my regard for propriety forbids its consideration in this place. Should those thus affected choose to consult me personally or by letter I will endeavor to enlighten them as far as possible.

There is an inadaptability often existing between the parties to a marriage contract that renders their lives unhappy and prevents them from having children. These troubles require skillful treatment and are generally of such a character that they yield readily when the requisite skill is obtained, and no one should be

discouraged if they should be unfortunate enough tc at first fall into the hands of quacks, for those unprincipled rascals are plenty and are ready to palm themselves off for scientific physicians. The sterile will do well to consider the subject and ask themselves the question, what is wrong? When people live unhappy lives, who is to blame? Are both, or is only one?

Such queries may lead them to be more forgiving to each other and thus relieve the mental causes of sterility. This may seem far-fetched and will perhaps be criticised by those who can see only causes of sterility in the tangible conditions already considered; yet if the mind can influence ante-natal conditions so as to cause "birth marks," may not lack of mental, moral, social, sexual and domestic harmony be equally as unfavorable to the occurrence of conception as to the perfect development of the child that has been conceived?

In closing, the author hopes that a consideration of this chapter will be the means of directing unhappy and sterile wives to the realization of their maternal desires as well as by previous chapters to relieve the fertile ones of the difficulties and dangers, the pains and the perils of childbirth.

CHAPTER XVIII

DISEASES OF CHILDREN

Children are subject to various disorders, the liability to at least some of which diminishes as they advance in age. It is estimated that fully one fourth of all the children born, die before reaching their seventh year.

To know what to do before the arrival of the family physician or in his absence is often of very great advantage, and the writer hopes his suggestions may be of practical value to the anxious parent and an aid to the physician in the performance of his many duties.

As the unprofessional reader will derive little or no benefit from pathological considerations I shall omit them almost entirely and, instead of pursuing the usual arrangement of diseases by groups and classifying them according to their pathology, I shall consider them in a manner that seems to me to be of the greatest convenience to the reader, endeavoring to render the subject as intelligible and practical as brevity will permit.

Unless otherwise specified, the doses advised in this chapter will be for children from one to four or five years of age and should be increased for those older, adding about half as much more for children between

five and ten, double from ten to fifteen and treble for adults. This plan will be rather more convenient than the old one of graduating the dose by years from one to twenty-one, particularly as I do not intend to prescribe remedies in such a manner as to endanger life by the difference of a fraction of a dose.

It requires not a little tact and discrimination to properly investigate the disorders of childhood, particularly among very young children. We are compelled to depend upon signs almost entirely. These should be well understood by the mother or nurse, for the attending physician must derive his information largely from those who are constantly present, and as many of these signs appear only at intervals a habit of observation should be acquired that every sign may be noted at its occurrence.

GENERAL SIGNS

Among the sources from which information may be obtained in children who cannot convey a knowledge of their condition by speech, are the countenance, gestures, attitude, breathing, circulation, sleep, cry, discharges, skin, temperature, odors, the tongue, aggravations, etc. We are to make use of our senses, see, hear, feel and even smell! Some diseases generally appear at certain seasons of the year. The prevalence of epidemics should put us on our guard.

The expression of the countenance varies with the stages of the disease as well as in different diseases. In affections of the *brain* and *nervous system*, the forehead is contracted and heavy, the brows knit, the eyes vacant, expressionless or wild, staring, fixed, sometimes squinting, bloodshot, half open, dropping of the lids, the pupils contracted in the early stages of the

disease and dilated later on; the face is generally hot and flushed, spasmodic drawing of the features in twinges of pain. Sometimes the upper lip will be drawn tightly over the teeth and perhaps be almost livid.

In *diseases of the liver*, the skin and eyes become yellow and sodden.

In *worms*, and *intestinal irritation* from other causes, the nose and upper lip are apt to be swollen, the white of the eyes of a pearly cast, a sharp white circle around the mouth, and if fever is present the rest of the face flushed.

In *bowel diseases*, the cheeks are sallow, sunken, mouth compressed and the lips drawn, dry, dark, parched and, as the disease progresses, anxiety, emaciation, the chin prominent, the eyes sunken and hollow; if not stupid, the whole features sharp; as exhaustion comes on, the face is alternately flushed and pale, hot and cold; and in the latter stages the face is glistening, pale, cold, eyes sunken, half closed, lips parched and the features pinched.

In *diseases of the respiratory organs*, as pneumonia, bronchitis, etc., the face is flushed dusky red, nostrils working, dilating with each inspiration and contracting with each expiration, the brows knit, lips livid, sharp, dark circle around the mouth, and in advanced cases, emaciation, etc.

In *measles*, the whites of the eyes are red, the eyes watery, overflowing, squinting, avoidance of light, the lids swollen and the general appearance as if crying.

In *scarlet fever*, the eyes are often red and watery, but never overflow, and give the appearance of crying, as in measles, and the intolerance of light is not so marked.

In *chronic diseases*, the face pales and flushes at intervals, the eyes sunken and pupils dilated, with circles beneath, the whites muddy, the cheeks hollow (particularly in diseases of the nutritive organs), sunken, complexion sallow. In diseases of the lungs, the cheeks are sunken, emaciated, pale, with a circumscribed redness, the eyes often unusually bright.

The attitude and gestures aid in indicating the location and character of the disease. Early, there will be inattention to surrounding objects, languor or restlessness. In *inflammatory diseases* of the chest and abdomen, motion will be avoided as much as possible, the position, on the back with the knees bent and drawn up, sharp cries as there is sudden twinges of pain. As a rule the pain of inflammation causes the child to lie very still. *Spasmodic* pain causes the child to start in terror and writhe and twist about as the muscles are caused to suddenly contract. In *convulsions*, the head is thrown backward, the eyes roll upward, the hands clenched, an arm becomes rigid, a leg drawn upward, the toes are drawn downward, the thumbs drawn into the palms of the hands, the child starts or screams or perhaps becomes unconscious, the breathing is spasmodic, perhaps frothing at the mouth, gnashing or grinding the teeth.

In *inflammation of the brain* or its membranes, the head is rolled from side to side as the child lies on its pillow, the hands make sundry motions in different directions and are frequently raised to the head, clutching at the hair or cap as if endeavoring to tear them away.

In *diseases of the mouth, teething, etc.*, it works at the mouth, bites, throws itself, rubs the gums, etc., and may have convulsions.

In *croup* and other suffocating diseases, the hands clutch at the throat, press it from side to side, the child struggles to maintain the upright position with the head thrown back to favor the entrance of air into the lungs.

The cry is indicative of displeasure, uneasiness or pain. In affections of the *lungs*, it is a sort of a groan. In *croup*, it is a hoarse, peculiar, metallic or crowing sound. In acute diseases of the *brain*, it is one single sharp, powerful cry at distinct intervals. In diseases of the *bowels*, it is a low moaning sound. Shedding tears during a sickness is regarded as a favorable sign.

The discharges should always be noted. They may be scanty, excessive or perverted. When there is *vomiting*, it should be noted to see if it is sour, thick, watery, clear, opaque, yellow or green, or if it contains food. Improper food is often got rid of by vomiting, or passing onward into the bowels it creates colic or diarrhœa. Diseases of the stomach are often characterized by vomiting, when it may contain the undigested food mixed with other matters. Yellow or greenish discharges indicate the presence of bile. Vomiting is nature's provision for the removal of an excessive amount of food in infancy. In cholera infantum the vomiting is persistent, watery and mixed with the food. It is one of the first symptoms of some eruptive fevers and often terminates a paroxysm of whooping cough. Diseases of the brain and injuries to the head may cause vomiting.

The stools, if frothy, sour or green, indicate derangements of digestion and are generally attended with griping. Slimy stools are usually present during teething and when worms are causing trouble. Blood and mucus indicate dysentery. Thin, offensive stools, varying in color from light to dark, are the principal characteristics of diarrhœa, and clay-colored discharges indicate deficient action of the liver. The frequency of the stools should be observed, for even though they present no unnatural appearance, if too frequent they indicate defective appropriation of nourishment and are apt to contain undigested food.

The urine is scanty, highly colored, has a strong odor and is generally loaded with a branlike sediment in fevers, inflammations and rheumatism. The quantity, color and smell may be ascertained by observing the diapers of children too small to use a urinal. In diabetes, it is clear and profuse. In nervous disorders, it is apt to be profuse, and on standing deposits a dirty whitish sediment and soon becomes offensive. In diseases of the bladder, it will be passed often and but little at a time. In affections of the liver, it will have a yellowish or saffron color.

The circulation in infancy is more variable than in adults, the pulse more rapid and easily influenced, and is not as reliable as a diagnostic means in infants as in grown persons.

The skin and its temperature are influenced by disease. It is hot and dry in fevers and inflammations, cool and moist in constitutional weakness. Profuse sweating with cold, clammy skin indicates debility. A doughy, inelastic skin is apt to be present in tubercular or scrofulous affections. It is yellow in jaundice, sallow

and sodden in diseases of nutrition. A bluish tint points to structural disease of the heart. It is red in fevers and eruptions, purplish or livid when the blood is imperfectly oxygenated, and dry and harsh in diabetes and Bright's disease.

The temperature has of late years become an important aid to diagnosis, and furnishes moderately reliable indications of the probable result. In health it is about 98½° Fahr., and any persistent or considerable deviation from this standard denotes disease, and the greater the rise the greater the danger. The temperature can be determined only by a thermometer designed for the purpose. As it sinks below the natural standard during the progress of a disease it indicates danger of collapse, though in diabetes it is usually one or two degrees lower than in health. It rises in fevers and inflammatory diseases, and if the rise is persistent shows there is severe illness and danger. When it rises to or above 106°, recovery is rare, unless the rise is only temporary.

Odors are not easily described, but a knowledge of them serves a very useful purpose. In measles or small pox, there is a peculiar smell that once observed will seldom be forgotten. In lung diseases, a yeastlike odor is often present. In stomach and liver diseases, the breath is sometimes very offensive. A peculiar smell accompanies fevers. In rheumatism, the perspiration is usually sour. When the stools have a sickening, cadaverous odor during any disease it indicates danger. Urine during protracted fevers, inflammations, etc., may have an ammoniacal odor, and indicates danger.

The tongue furnishes the intelligent practitioner with a vast amount of information. In health, the

mouth is moist and pale, the tongue moist, pale and partially covered with whitish mucus. When loaded with whitish curdy matter there is generally disturbance of digestion. A dry tongue is common in most febrile diseases. If it becomes moist after having been dry and furred, it is favorable. It is fissured in typhoid fever. Redness and dryness is present in inflammatory diseases of the alimentary canal; in the eruptive fevers, it is very red; it also indicates acute indigestion. A heavy fur shows disease of mucus membranes and, if yellow, disease of the liver; and a brown or black fur, a low state of the vital forces and, if dry, danger. A large, pale, flabby tongue indicates debility and tardy retrograde metamorphosis. A heavily coated, moist tongue indicates derangement of the secretions without inflammation. Redness of the tip and edges of the tongue indicates irritation of the stomach or upper part of the intestines. Gradual clearing of the tongue during disease indicates a tendency to recovery. If the tongue becomes browner, drier, dirtier each day, and the nervous system more feeble, the hope of recovery fades. When the fur comes off suddenly or separates in patches, leaving a glossy surface beneath, it is unfavorable.

Although the foregoing indications are not as complete as if this work were intended mainly for the guidance of physicians, and admit of many exceptions, they furnish many valuable guides to the recognition and location of diseases—an outline to diagnosis—as will be observed in the consideration of the following diseases.

EXCORIATIONS AND ULCERATIONS

Without the greatest attention to cleanliness, children are apt to get chafed behind the ears, in the

wrinkles of the neck and groin, and about the arms. This causes the child untold suffering, and unless it receives proper attention is apt to degenerate into more or less extensive ulcerations.

TREATMENT.—The prompt removal of discharges and carefully washing and drying the child will go far towards obviating this trouble, yet in fleshy children this alone may not be sufficient and additional means will be required. Bathe the irritated parts with warm milk and water, rejecting the common coarse soaps of commerce and, after drying carefully with a soft cloth, sprinkle with powdered starch and lay into the folds of the skin a bit of scorched linen rag. Dusting the parts with powdered lycopodium, which can be got at any drug store, is also an excellent means of preventing serious ulcerations, giving almost instant relief in chafes. When the trouble is persistent, bathing the raw surfaces with an infusion of golden seal is a very reliable remedy. The strength of the infusion should be a teaspoonful of the powdered root in half a pint of water; after standing a few hours, strain. To this we may add a little borax or in some cases ten grains of sulphate of zinc will do better.

In children of a scrofulous habit there is a disposition in such cases to form extensive sores, and attention to the child's general health becomes necessary. We must see that it receives proper nourishment and then give some alterative as:

Compound Syrup of Stillingia, .	4 ounces
Fluid Extract of Bayberry, .	½ ounce

Dose.—One fourth to one half teaspoonful three times a day. At the same time continuing the lotion of golden seal and zinc.

If this does not cure in a reasonable time, it might be well to substitute Peruvian bark for the golden seal and prepare and use it in the same manner.

VOMITING

Vomiting is often caused by overfeeding, and is one of nature's methods of disposing of surplus food. When it results from this cause, careful regulation of the diet will generally be all that is required.

For the most part vomiting is *symptomatic* of other diseases, though it may exist as a disease itself.

When it occurs in dyspepsia the food is usually undigested, in a state of fermentation, and the bowels deranged. In such cases the bowels require some laxative, such as castor oil, rhubarb or calomel, or we may put five drops of the fluid extract of nux vomica in a glass of water and give a teaspoonful every three or four hours. It exerts an excellent influence in many cases of chronic constipation in children and adults. In connection with this, give two grains of pepsin and a half a grain of subnitrate of bismuth either just before or after the meal.

Ordinarily, five drops of the tincture of ipecac in a glass of water given in teaspoonful doses every hour or two will control vomiting, particularly if associated with a looseness of the bowels.

If the tongue has a yellow coating or there is a yellowness around the mouth, alternate the ipecac with the nux vomica, prepared as for dyspeptic vomiting.

If the vomited matter is sour, dissolve a teaspoonful of bicarbonate of soda in a glass of water and give in sips every half hour till the acidity is corrected, continuing the nux vomica.

A plaster composed of allspice, cloves and cinnamon, or ginger and Peruvian bark, applied over the stomach is an excellent auxiliary means, but is not to be left on too long, on account of the irritation of the skin it may cause.

When vomiting occurs as a symptom of some other disease, the treatment recommended for that will be most appropriate, though the temporary use of the means just considered may become necessary.

CONVULSIONS

Spasms or fits, as convulsions are often called, may arise from a variety of causes. They may be symptomatic of disease of the brain or nervous system, such as meningitis, tumors, hydrocephalus, etc., but as generally met with in children they are caused by irritation reflected to the brain from different parts of the body. In this way they are caused by the presence of worms in the intestinal tract, by indigestible food, acidity of the stomach, flatulence, teething, retention of urine, foreign body in the ear, surface irritation, as from burns or wounds, the striking in of some eruption, etc. Convulsions frequently occur at onset of certain diseases, especially pneumonia, scarlet fever, acute indigestion, typhoid fever, measles and diphtheria. Convulsions are common in whooping cough. The younger and more irritable the child, particularly if of a highly nervous temperament or scrofulous constitution, the greater its liability to fits from intestinal irritation. Convulsions are always to be regarded with apprehension. Four fifths of the cases of convulsions occur during the first two years of life.

The symptoms vary in duration and severity, lasting from a few minutes to several hours, and the attack

may be repeated at indefinite intervals. There is a sudden and involuntary jerking of the extremities, twitching of the muscles of the face, grating the teeth, rolling the eyes, perhaps frothing at the mouth, the thumbs drawn into the palms of the hands, and the hands clenched and the toes drawn downward. The pulse may be accelerated and irregular, small or hard, and the face pale, flushed, or slightly blue, especially about the lips. Beads of cold sweat often cover the forehead.

The contents of the bowels or bladder may be expelled and consciousness may be wholly or partially lost. Toward the end of the convulsion the jerking becomes less frequent and less severe—there is a long-drawn breath and the child passes into a sleep or coma. The premonitory symptoms, twitching of the face, grinding of the teeth, without actual convulsions, are often denominated *inward fits.*

In the treatment, we must be governed by the cause as far as possible. If the premonitory symptoms are noticed or if the child can swallow give a few spoonfuls of salt and water. It is always at hand and is an excellent remedy. It may be given freely, for it will only cause vomiting if more than is necessary be taken, and this is often desirable. Put the feet in hot mustard water, and if the head is hot and the face flushed apply cloths wet in cold water to the head. It is better, however, to put the child at once in a hot bath (about 100° F.). Keep the head raised and apply to it cloths wet in cold water. Do not wait to undress the child before placing it in the water—that can easily be done whilst giving the bath and rubbing the body. The bath should

last about five minutes and then the baby should be taken out and wrapped in a warm blanket.

The inhalation of a few drops of chloroform or ether from a napkin held near the nose almost always affords relief. Prevent biting of the tongue by placing a knife handle, spoon, etc., between the teeth. Give a copious warm rectal injection of soap and water to clear out the lower bowel.

When the convulsions are caused by the *irritation from teething*, and the gums are hot and swollen, give a teaspoonful of the following, every hour:

Bromide of Potassium, . .	1 dram
Water, ...	2 ounces

Five drops of tincture of aconite can be added to the above if there is much fever.

Discontinue it when the fit is broken, or continue it in smaller doses every three or four hours.

When due to *worms*, give the salt and water already mentioned, pumpkin seed tea or ten drops of turpentine in a teaspoonful of castor oil, increasing the dose for a child over three years old. Follow this with the treatment laid down under the head of worms, which see.

If the fit is caused by *irritation of the stomach or bowels* from indigestible food, give an emetic of ipecac or lobelia, 10 or 15 drops in warm water, and repeated every 15 minutes till free vomiting ensues. One half a teaspoonful of ground mustard in a cup of warm water given part at a time is a very prompt emetic and almost invariably at hand. Follow the emetic with a dose of castor oil to move the bowels, or the neutralizing mixture mentioned in the latter part of this book. (Page 411.)

If the stomach is sour, give the neutralizing mixture or, if not at hand, put a teaspoonful of bicarbonate of soda or saleratus in a gill of water and give it in tablespoonful doses every 10 or 15 minutes. Attention to the bowels is necessary, and as the neutralizing mixture accomplishes both purposes it is preferable.

A highly sensitive condition of the *nervous system* predisposes to fits, and the gelseminum and bromide of potash already mentioned will be found an excellent remedy to modify this condition and thus prevent the fits, but attention to the removal of the causes is necessary and must not be forgotten.

When the convulsions are due to the sudden *striking in of some eruption*, use the warm bath at once, and be careful in removing the child from it that a chill is not experienced. At the same time give:

Tincture of Aconite, . . .	5 drops
Tincture of Belladonna, . .	5 drops
Water, ...	6 ounces

Dose—A teaspoonful every half hour to one hour.

Call the family doctor in the meantime, as the troubles are sometimes complicated and need combined treatment.

COLDS

Although most people regard a common cold with indifference, a writer has well said that "Colds destroy more lives than any other cause." They result from exposure in some way or other and are too well known to require any description. All are liable. They may affect any or all parts of the body. Colds vary greatly in severity, and their frequent repetition lays the foundation for severe and often fatal diseases. Indeed, colds

are the immediate cause of a large percentage of our diseases.

TREATMENT.—Colds should always receive prompt attention, for neglect is often fatal. Give a hot foot bath on going to bed and drink a cup of warm catnip, boneset or composition tea, cover warm and encourage perspiration, but be careful the next day not to renew the attack. A mild cathartic after the sweat will aid in breaking up the cold. Hot lemonade at night has enjoyed a good reputation.

Five to ten drops of aconite in a goblet half full of water, given in teaspoonful doses every half hour or hour until perspiration is established, is good treatment for either child or adult. An alcoholic or spirit vapor bath is always beneficial.

INFLUENZA—LA GRIPPE

This is an acute contagious disease, often appearing as an epidemic. Most writers consider influenza and colds together, but as the former is usually so much more severe I have separated them with the view to impress the importance of prompt and efficient treatment, for while the disease may not be fatal itself it often lays the foundation for chronic nasal catarrh, bronchitis and even consumption.

SYMPTOMS.—An attack of influenza is generally ushered in with chilliness or rigors, lassitude, stiffness and soreness of the muscles, sneezing, a dryness or increased discharge from the nasal cavity, oppressed breathing, soreness of the throat, redness and watering of the eyes, the nose sore and swollen, thirst, etc. With these symptoms there is a fever of varying severity which is apt to remit in the morning. The tongue is coated, the bowels deranged and the urine scanty and

highly colored. A troublesome cough comes on, at first dry and irritable, which in time is followed by expectoration, the child snuffles, and in adults the secretion sometimes becomes so profuse as to keep the person "hawking" or spitting all the time. There is more or less dullness of the intellect, headache, darting pain, and in some cases there may develop croup, bronchitis or pneumonia.

TREATMENT.—In mild cases of influenza the symptoms will so nearly resemble a common cold that unless an epidemic of the disease is prevailing it will be impossible to distinguish between them. The treatment advised for colds is appropriate in mild cases, but in severer ones a more thorough course may be necessary. Keep the little patient in bed, give liquid foods and apply hot applications to chest or other painful parts. An old-fashioned domestic remedy of considerable efficacy, I well remember, in "childhood's happy hours," consisted of vinegar, molasses and butter stewed together and taken hot on going to bed; for an adult a large cupful was a dose.

In the early stages of the disease a thorough sweat is decidedly appropriate. A spirit vapor bath (described elsewhere) aided by a hot mustard foot bath and the warm teas advised for a cold, followed by the use of aconite as for a cold, and pushed till the pulse is regulated and the fever controlled will in nearly every case cut short the attack. Allay thirst with drinks of lemonade, flaxseed tea or water.

If the bowels are constipated give some mild laxative, but always bear in mind to so time it that it will not be operating on the bowels when the patient is bathed in perspiration.

If the symptoms of nasal catarrh predominate, snuff up the nose some warm salt and water (one teaspoonful of salt in one pint of water) or spray nose with Dobell's Solution. Inhaling the vapor of ammonia often acts equally well, and is almost always to be found in every house. The vapor of camphor is also excellent. Put a teaspoonful of the spirits of camphor into a teacup of hot water and inhale the vapor as it arises, snuffing it well up the head.

ANOTHER.—Into a wide mouthed bottle, capable of holding an ounce, mix two drams each of carbolic acid and spirits of hartshorn; then put in cotton batting enough to absorb the mixture, and inhale the vapor, keeping it corked when not in use. The evolution of the vapor may be increased by setting the bottle in a cup of hot water during inhalation.

When the severity of the disease is spent on the chest, the following will relieve the inflammation and soreness, promote expectoration and overcome the cough:

Tincture of Aconite, . . .	10 drops
Tincture of Bloodroot, . .	1 dram
Paregoric, ...	3 drams
Compound Syrup Squills, . .	12 drams

Mix. Dose—For a child two to five years old, 10 to 15 drops three or four times a day. For an adult a teaspoonful.

If there is a sense of dryness in the throat and bronchial tubes, a whistling noise in breathing, a poultice of flaxseed applied to the chest as warm as can be borne will aid in its relief.

Great care must be taken not to catch a fresh cold during the course of the disease, which is apt to continue a week or two, unless the treatment cuts it short,

as it would be very apt to bring on a renewal of the attack more severe than at first and perhaps cause a serious disease of the lungs.

After the severity of the attack is passed, tonics may be required, as iron, quinine, syrup of hypophosphites, etc.

SPASMODIC CROUP

This is the ordinary croup of childhood, due to a spasm of the vocal cords, and is also known as false or pseudo croup. When the attack appears suddenly and without warning, in her child, the mother is often alarmed and terror-stricken. The common causes of this distressing affection are exposure to cold and damp weather, indigestion, constipation, rickets and adenoids. It is most common in children between the ages of six months and five years, and a child that has had one attack will be very liable to have more, especially when the weather is cold, damp and changeable.

Symptoms.—The attack usually comes on suddenly during the night, although there may have been symptoms of a cold for a day or two previously, with some cough and hoarseness, but not sufficiently severe to occasion any anxiety.

The child is wakened suddenly from a sound sleep with difficulty of breathing and a peculiar brassy cough, which once heard can never be forgotten; the head is thrown backward, the skin is hot, the pulse rapid, the eyes protrude, the countenance expresses anxiety, the lips and finger tips slightly blue, the breathing attended with a whistling sound, the sides of the chest and the notch above the breast bone are depressed, the voice is rough and hoarse, croaking, and is finally reduced to a whisper. Sometimes the child is disposed

to be drowsy, waking as the paroxysms occur. The attack lasts from half an hour to three hours, and then the cough lessens in force, the breathing becomes easier, the little one breaks into a free perspiration and soon falls asleep, tired or worn out with its suffering.

The next day the child seems apparently well, with the exception of a croupy cough or slight soreness of the throat. On the second night there may be another attack just as severe as the first, and on the third a lighter and milder one.

TREATMENT.—During the attack apply to the throat cloths wrung out of hot water or wrap a cold cloth around the neck and place the child in a hot bath. A splendid method of treatment is to place the child in a croup tent that can be easily improvised over the crib by fastening a broomstick to each corner and covering with a blanket. An umbrella placed on the bed and covered with a blanket makes a good substitute. The tent is filled with steam from a croup kettle or ordinary tea kettle, and a teaspoonful of compound tincture of benzoine (Friar's Balsam) poured into the water adds to the value of the steam. When the catarrhal secretion is profuse and the throat so full of mucus that it embarrasses respiration seriously, an emetic becomes necessary. Vomiting should be induced by tickling the throat or by running the finger down the throat or by giving lukewarm water and salt. From one half to one teaspoonful of the wine or 20 drops of the syrup of ipecac may be given every two hours until vomiting occurs, or a little alum mixed with honey or molasses and given in teaspoonful doses. A simple enema of soap and water to clean the bowel is always advisable. Goose oil or lard applied to the chest and

given internally in teaspoonful doses are popular in some parts of the country, but I have no confidence in them. Woolen cloths wrung out of an infusion of hops or hops and vinegar and applied to the chest as hot as can be borne are beneficial, and the inhalation of the hot steam from the same infusion is valuable. In the application of such means care should be exercised to prevent the cloths becoming cold and doing more harm than good.

Physicians of the eclectic school rely on bloodroot and lobelia as an emetic in this disease and, though nauseous, I regard them as less dangerous than those already described. The acetic syrup of bloodroot and lobelia when it can be obtained is a remedy on which I place great reliance in croup. The following prescription can generally be obtained at any drug store, and answers the purpose well, if the real acetic syrup cannot be had:

Tincture of Lobelia, . . .	3 drams
Tincture of Bloodroot, . .	3 drams
Simple Syrup, ...	1 ounce
Vinegar, ...	2¼ ounces

Dose—Fifteen drops to a teaspoonful repeated once in fifteen minutes till vomiting occurs. The dose must be varied according to the age of the child, the smaller dose generally being sufficient for those two or three years old.

After vomiting, give it in smaller doses an hour or two apart, continuing the aconite at the same time, and increase the intervals between the doses as the symptoms become less severe. If necessary, it may be again pushed to cause vomiting in the same manner as before. Unpleasant as this medicine is, it is a very certain one, relaxing the spasm of the larynx, relieving the suffocation, removing the accumulations of

mucus and materially aiding in overcoming the inflammatory symptoms.

The avoidance of colds, regular bowels, plain, easily digested food, especially for supper, and a properly ventilated bedroom will do much to prevent further attacks of croup. If the child is a "mouth breather" the tonsils and adenoids if enlarged should be removed.

Membraneous or true croup is diphtheria of the larynx, and under that heading its symptoms and treatment will be given.

ADENOIDS

These are masses of enlarged lymphoid tissue in the upper part of the throat (vault of the pharynx, nasopharynx) directly back of the posterior openings of

Figure 30

the nose. They are very common in children between the ages of six and ten, especially in damp, changeable climates.

Causes.—Heredity has an important influence in the production of adenoids. Frequent colds, measles, diphtheria, scarlet fever, are frequently followed by a catarrhal inflammation of the throat that results in the formation of adenoids.

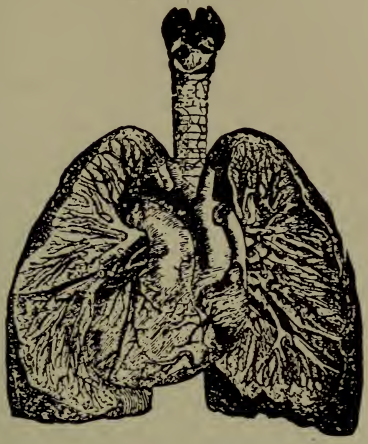
Symptoms.—Constant discharge from the nose, frequent colds in the head, restlessness at night, noisy sleep or snoring, night terrors, thick speech, are almost always present. Owing to the obstruction to free respiration, the child is compelled to breathe day and night through the mouth (mouth breather). In some cases the bridge of the nose becomes depressed, the lips thick, the edge of the nostrils sore. Ear-ache, deafness and cough are common symptoms. Many children suffering from adenoids become anæmic, listless, apathetic, backward in school studies and do not want to play.

Treatment.—The nose and throat should be kept clean by sprays, douches or gargles. For this purpose Serler's tablets that can be bought at any drug store may be used. Crush one tablet, dissolve in four tablespoonfuls of clean warm water and use as spray to nose and throat with atomizer. One part of listerine and seven parts of water will also act as an excellent cleansing agent. Such remedies, however, are only nose-cleaners and never cure either catarrh or adenoids. The adenoids should be removed by a surgical operation, and when this is done carefully and thoroughly by a physician who knows just how to do it the results are most pleasing.

ACUTE BRONCHITIS

This is an inflammation of the lining mucous membranes of the bronchi or tubes of the lung and is a very common ailment in children, especially in the early

Figure 31



Treachea (windpipe), heart, and lungs

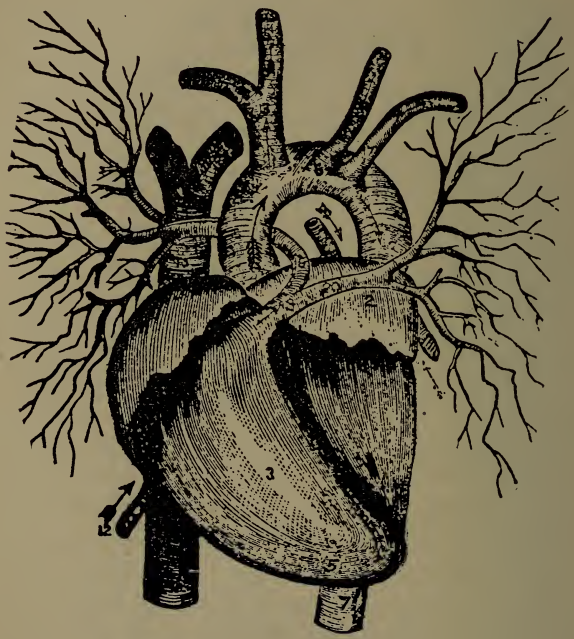
Figure 32

The Left Ear

A, vestibule; B. auditory canal; C, middle ear; D, semicircular canals; E, cochlea; G, eustachian tube

spring months when high winds and sudden changes in temperature are so frequent. Taking cold, insufficient clothing or getting the feet wet are the usual

Figure 33



The Heart and Blood Vessels

1, right auricle; 2, left auricle; 3, right ventricle; 4, left ventricle; 5, aorta; 6, the arch of the aorta; 7, descending aorta; 8, rigid subclavian vein; 9, left subclavian vein; 10, descending vena cava; 11, ascending vena cava; 13, innominate artery; 14, right carotid artery; 15, right subclavian artery; 16, left carotid; 17, left subclavian; 18, pulmonary artery dividing into two branches, of which one, 19, goes to right lung and the other, 20, to the left; 21 and 22, pulmonary veins.

causes, but the disease may also occur as a complication of whooping cough, measles, diphtheria and many contagious diseases.

SYMPTOMS.—The disease is often preceded by snuffles, running at the nose, sore throat or hoarseness. Fever, cough, rapid breathing and soreness and tight feeling in the chest show that the inflammation has extended to the tubes of the lung (pulmonary bronchi). The fever is not high, but the child's respiration may be 40 to 50 per minute. The cough at first is dry and tight, but later becomes loose; the sputum is swallowed and often causes vomiting. A child under four does not expectorate. Rattling or wheezing sounds in the chest are frequently heard. Loss of appetite and restlessness often exist. In the very severe types, the breathing becomes more rapid, the pulse weaker, the skin clammy, there is great prostration and the child falls into a deep stupor or convulsions end the struggle.

TREATMENT.—Keep the child in bed in a well ventilated room free from draughts. Give a laxative dose of castor oil at once or, if the taste of the oil be objectionable, a tablet containing one tenth of a grain of calomel every half hour for five or ten doses. The food should be liquid, soft or semi-solid, given in small quantities regularly every three hours, and hot drinks and hot mustard foot baths may be given, hot fomentations or poultices applied to the chest, but an oiled silk jacket worn during the whole attack of illness is preferable. The jacket is made like a vest and consists of three layers—an inner one of cheesecloth or light flannel, a middle one of half an inch of cotton batting, an outer one of oiled silk. When the cough is very tight a mustard paste made by mixing one part

of mustard with from four to six parts of flour or corn meal in some lukewarm water and spread between two layers of muslin or soft linen and large enough to envelop the child's whole chest may be applied two or three times daily for a few minutes (usually about five), until the skin is slightly reddened. After removing the plaster, the skin is powdered and the jacket again put on.

Rubbing the chest with camphorated oil will often give relief.

Inhaling the steam from one pint of boiling water to which one teaspoonful of compound tincture of benzoin is added will often soothe the inflamed air passages. In young children the air may be moistened by allowing steam to pass from the tube of an Arnold sterilizer or tea kettle through one side of a canopy placed over the bed.

In the first stage give:

Tincture of Aconite, . . .	20 drops
Wine of Ipecac, . . .	1 dram
Sweet Spirits of Nitre, . .	2 drams
Simple Syrup, to make . .	2 ounces

Directions—One teaspoonful in a little water every two or three hours.

In the second stage when the secretion becomes thick and viscid, ropy or lumpy, and is coughed up only after considerable effort, especially in the morning, give:

Chloride of Ammonium, . .	1 scruple
Compound Licorice Mixture, .	2 ounces

Dose for a child five years old—One half teaspoonful in water every four hours.

PLEURISY

An inflammation of the serous membrane covering the lungs is called pleurisy. It is by no means common

in children, and when it does occur is usually as a complication of some other disease, such as pneumonia, scarlet fever, measles, typhoid fever, tuberculosis of the lungs, influenza, rheumatism.

There are two kinds: (*a*) Dry pleurisy. (*b*) Pleurisy with effusion of serous fluid into the pleural cavity. When this fluid changes into pus the disease is called empyema.

SYMPTOMS.—Sharp localized pain or "stitch" in the side, short, dry, teasing cough, shortness of breath; child usually lies on the affected side, spaces between ribs are bulging, fever about 101°-103° F. Unless the case becomes an empyema, the disease rarely lasts longer than ten days.

TREATMENT.—Put the child to bed, open bowels freely, apply poultices, fomentations or mustard plasters to painful part of chest. A flannel band around the chest sometimes relieves the pain. If the urine is diminished give from 1 to 5 grains of citrate of potash every 4 hours according to age. When the fluid in the pleural cavity is excessive, the physician will remove it by aspiration or other operation.

PNEUMONIA

This affection, also known as *inflammation of the lungs, lung fever, winter fever, etc.*, is an acute inflammation of the substance of the lungs, of frequent occurrence and serious in its results. Its fatality, however, has been materially diminished by the improved methods of practice of late years.

When the disease is confined to a circumscribed portion of the lung, it is termed *lobular pneumonia;* when only one lung is affected, *single pneumonia;* when both

lungs are involved, *double pnuemonia;* if pleurisy exists in connection, *pleuro-pneumonia;* and when a typhoid condition is developed during its course, *typhoid-pneumonia.*

In the majority of cases it is caused by cold, but those who have been debilitated by previous diseases, intemperance, faulty nutrition, etc., from any cause, are specially liable.

Symptoms.—For a day or two there is languor, dullness, a feeling of oppression in the chest, short cough, chilliness, etc., similar to a common cold. These symptoms may not attract any attention for a day or two when the advent of the disease will be marked by a pretty distinct chill, often resembling that of malarial fever. In children the chill is often replaced by convulsions. This is succeeded by fever, pressure in the chest, which often increases to a constant pain that is aggravated by an annoying, short, dry and distressing cough. The pulse becomes frequent, the skin is hot and dry, the face flushed, the eyes red; there is severe pain in the head and back, the appetite is lost, the tongue is covered with a whitish coat, the bowels constipated and the urine scanty and highly colored, usually depositing a branlike sediment on cooling. As the disease advances, respiration becomes shorter and more difficult, the nostrils are dilated and the chest and shoulders elevated with every effort at inspiration. Delirium is often present.

At first the cough brings up a little frothy mucus, but later on the sputum becomes opaque, very sticky and tenacious and assumes a peculiar rusty color, which is the characteristic expectoration of pneumonia.

In mild or favorable cases, and those in which the disease yields to the treatment properly, the expectoration now becomes more free, the cough looser and less painful, the fever diminishes and the symptoms subside, so that in from seven to nine days from the attack convalescence is established.

In the severer cases all these symptoms are increased. The delirium is constant, there is great prostration, picking at the bed clothes, and dirty accumulations are seen on the teeth. Expectoration may be profuse, purple, yellow or bloody, and the breathing greatly embarrassed. In fatal cases, the delirium passes into stupor, and death may occur from the second to the fourth week. Recovery, however, may take place by the gradual subsidence of the symptoms, but a cough is apt to remain, or other diseases of the lungs, as hepatization, hemorrhage or consumption develop.

The diagnosis of inflammation of the lungs in children is not always easy until the disease is well advanced, although physicians by the aid of *auscultation* and *percussion* are able to distinguish it when the other symptoms are unreliable. To the unprofessional these aids are not available. Bronchitis and pleurisy so much resemble pneumonia that it is often difficult to distinguish between them, but this is not so important to the general reader, for the treatment, particularly in the early stages, is almost the same.

TREATMENT —The disease usually subsides about the seventh or ninth day, and during the whole course of the disease the little patient should be kept perfectly quiet in bed in a large, airy, well ventilated room. If we recognize the disease early and are successful in our efforts, we may cut it short or greatly modify its

severity and thus materially promote recovery. Give a hot mustard foot bath at once, with warm teas internally to promote perspiration, and then commence with the following:

Tincture of Aconite, . . .	40 drops
Water, ...	4 ounces

Mix and give a teaspoonful every hour till the skin shows a disposition to moisten and the pulse becomes less frequent, then lengthen the interval to two or three hours, and thus continue it till the inflammation is subdued.

If the difficulty of breathing is marked and the pain in the side severe, as in pleurisy, I would give in alternation to the foregoing:

Tincture of Bryonia, . .	5 drops
Water, ...	4 ounces

Dose—A teaspoonful every hour till relieved, and then it may be omitted.

Open the bowels freely and apply hot poultices, hot fomentations or the oiled silk jacket described on page 319.

The scantiness of the urine may necessitate a remedy, when three to five grains of acetate of potash in a tablespoonful of water repeated three times a day will act nicely. This dose may be increased, if necessary, and for older children.

Throughout the case give plenty to drink. Lemonade, acid fruits, jellies, water, milk, etc., are most agreeable.

The diet should never be solid, but liquid or very soft. Milk, koumyss, beef tea, mutton broth, oyster soup, soft toast and, if there is much prostration, milk punch, eggnog, wine, etc., but care should be taken never to overstimulate. As improvement occurs, puddings, custard, scraped beef may be given, and still later a full, solid diet.

A warm alkaline sponge bath once or twice a day will materially promote comfort and recovery. Warm water containing a little common soda or saleratus is all that is necessary, care being taken, however, to prevent exposing the body when bathing lest a chill occur.

During convalescence, tonics are called for—iron, quinine, hypophosphites, etc. The following is a good combination:

Quinine, ...	10 grains
Compound Syrup Hypophosphites,	2 ounces

Dose—For a child one to two years old, one fourth to one half a teaspoonful three times a day.

Sleep is encouraged by bathing at bed time, but if necessary, small doses of Dover's powders at night may be given. One or two grain doses are sufficient.

The cough is sometimes very troublesome and may call for a special remedy, though in the milder cases the treatment already advised will be sufficient. When something of the kind is needed and in those cases where the cough continues after the inflammation has subsided give:

Tincture of Bloodroot, . .	1 dram
Tincture of Ipecac, . . .	1 dram
Compound Syrup Squills, . .	1 ounce
Syrup of Wild Cherry, . .	2 ounces

Dose—One half to one teaspoonful three or four times a day. When the cough is unusually severe and annoying, I add half an ounce of paregoric to the above; some, however, might prefer half a grain of morphine in place of the paregoric. This use of the opiate would of course overcome the necessity of the Dover's powder already mentioned.

TUBERCULOSIS—CONSUMPTION

Consumption is a serious constitutional malady characterized by a wasting of the body and attended

by an affection of the lungs, in which sooner or later tubercular deposits occur. No other disease is so widespread or fatal as consumption. It preys upon all classes of society and is the cause of about one seventh of all the deaths that occur in Europe and North America.

It is much more prevalent among children than is usually supposed and is closely allied to scrofula. Some writers regard them as essentially the same, one being only a modified form of the other.

The disease is characterized by feeble vitality, emaciation and loss of strength, sooner or later followed by a cough, expectoration, difficulty of breathing, fever, night sweats, hemorrhage and death.

Consumption or tuberculosis is an infectious disease, and it has been definitely and positively proved that the actual cause is a germ called the Bacillus Tuberculosis, first described by Dr. Koch in 1881. The germs or bacilli are found in enormous numbers in the sputum or expectoration coughed up by those suffering from pulmonary tuberculosis or consumption of the lungs, and when this infected sputum is allowed to dry it enters the air as a fine dust, in this way spreading the disease in every direction and infecting houses, bedrooms, furniture, carpets and clothing.

The disease is most frequently contracted from breathing or inhaling air or dust containing the consumptive germs. It may, however, result from slight wounds or abrasions of the skin becoming inoculated with the germs, and tuberculosis of the intestines sometimes results from eating meat or milk from tubercular cows.

Certain conditions of the system render it more favorable to infection. In from ten to fifty per cent of cases there is a family history of tuberculosis. It

very commonly occurs in weak, delicate, sickly people who have low vitality or deficient chest expansion. No age is exempt, but tuberculosis of the bones, intestines and covering of the brain is more frequent in children than in adults. Depressing influences and anything that lowers the standard of vitality and lessens the resistance of the tissues favors infection. Thus, we find tuberculosis frequently following bronchitis, colds, pneumonia, pleurisy, measles, intestinal catarrh, fast life, exhaustive discharges, whooping cough, etc. Local injuries may so weaken the tissues that they are readily infected. Thus, for example, a simple inflammation of a joint may become tubercular.

While some of these causes do not apply to childhood, I have introduced them here as a warning to the older ones into whose hands this book may chance to fall. Impairing the constitutions of the parents, they are, through hereditary transmission, indirect causes of consumption.

In spite of the fearful mortality of this disease and the general belief that it is incurable, researches during the past twenty-five years prove conclusively that it *can* be cured. All modern writers are agreed upon this point. Numerous cases are on record where complete recoveries have been made, and many years afterward the person has died from other diseases. Post mortem examinations have revealed many cases of the kind.

The symptoms of consumption vary with the stage and progress of the disease. In most cases a general breaking down of the general health occurs for a longer or shorter time before the lung symptoms are developed. Whenever we find a growing weakness, paleness, loss

of flesh, quickened pulse, a little fever and shortness of breath coming on without any apparent cause we have just reason for anxiety. These are premonitory symptoms, and remedies will now be found most efficient. Soon a cough, generally hacking and worse at night, occurs. The patient says "I have taken cold and will soon be all right." Food does him no good; the cough becomes worse, expectoration more profuse. There may be a remission of all these symptoms and the victim think he is getting well, but another cold sets him back and develops the disease more severe than before, and fever and night sweats occur. Thus the disease goes on, alternating better and worse. Each time more severe and the recovery not quite so perfect. This may last for years, or it may complete its course in a few months. It is needless to trace the disease further; it is easily recognizable now, and its onward progress is marked with symptoms so plain that none need be longer deceived.

In children, however, the symptoms of the lung disease are not always as well marked as in the adult, the deposition of that peculiar substance termed *tubercle* is apt to be more generally distributed throughout the abdominal and thoracic viscera. Consumptive children may waste away and die without the development of the lung symptoms when it receives the more technical name of *tuberculosis*.

Treatment.—The most important consideration is the successful treatment, and the more thoroughly and persistently it is carried out the greater the chances of success. Any who have the slightest reason to believe that they are developing a consumption, or are in the least danger of doing so, should not rest until they have

marked out a course of hygienic and medical treatment. Do not wait a single day, time is precious. Your life depends on what you do now. Do not be put off by evasive answers. If you have not implicit confidence in your family physician's skill, consult some one else. Do not permit deference to old fogyism to rob you of life. Errors committed now will be overcome only with the greatest difficulty.

We may indicate the general plan of treatment, but each individual is apt to present characteristics or modifications that will demand attention and perhaps require changes of remedies. It is too serious a disease to admit of unprofessional control, and yet there is time to select competent professional advice. I shall therefore beg the reader's pardon if I confine my remarks, mainly to the outlines of treatment, or to that part of it which the patients themselves or their friends must conduct for them.

Take advantage if possible of climate, hygiene and medicine. As to climate, seek that which will enable you to live a greater portion of the time in the open air. No one climate is suitable for all tubercular patients. A dry, clear, pure air with an even temperature is best. Young people in the early stages of the disease usually do best in a cold, bracing climate like the Adirondacks, but those who are old or have the disease in an advanced form are, as a rule, better off in a warm, dry air like that of Southern California or Carolina. The very young, the very old and those in whom the disease is well advanced are better treated at home.

Study the rules of hygiene and do everything that can contribute to health. Take plenty of good air,

gentle exercise, but not enough to cause fatigue, nutritious food, and keep every organ in as nearly a healthy condition as possible. We must avoid every debilitating influence. The disease breaks down. We must build up.

It is folly to depend upon cough medicines for, as a rule, they only relieve one symptom at the expense of another; many of them ease the cough and destroy digestion. When employed they must be expected to benefit only the one symptom—cough. It must be understood that the cough in consumption is only a symptom of the disease, it is one of its branches as it were, and unless it is very troublesome is best left alone.

Pain in the chest is often relieved by mustard paste, poultices or painting with tincture of iodine.

Details of this character should be presided over by a competent physician who will provide for such indications as they arise.

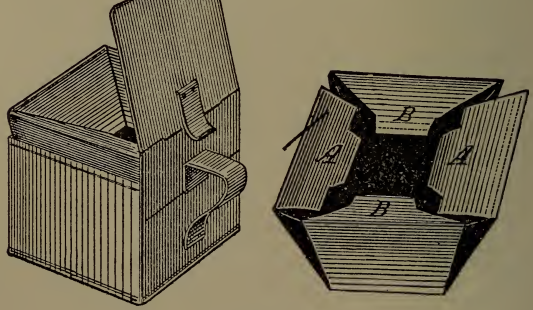


Figure 34

The sputum must be coughed or spat into a paper sputum cup (Fig. 34), that should be destroyed every

day by burning. If a porcelain or other cup is used, it should be half filled with a 2% solution of formaldehyde or carbolic acid, constantly kept covered, emptied and boiled every day. Paper napkins or pieces of gauze or old linen are preferable to handkerchiefs. Kissing must not be allowed. The bedclothes and dishes used for eating and drinking by a person with tuberculosis should be frequently boiled and disinfected.

A person with tuberculosis should when possible remain out of doors all day, and at night sleep alone in a room with all the windows wide open and the bed so placed that he will get the full benefit of the incoming air, but at the same time be protected from draughts. Sleeping in a tent or on a partly enclosed veranda is excellent. A window bed for tubercular patients is sold by many dealers

The diet should be simple, wholesome and abundant. Milk, cream and eggs should be taken freely, but fresh meats, fresh fish, vegetables, cereals and fruits may also be used. Fats will do good if the patient can eat and digest them, but sweets, dainties, highly seasoned and rich foods should be avoided. Scraped beef, raw or slightly browned in the oven, is tasty and beneficial. Ale, porter or light wines may be used in moderation. When milk and cream are not well borne by the stomach, cod liver oil in as large doses as the patient will tolerate should be taken.

Flannels should be worn at all times and the clothing must be warm and adapted to furnish protection against atmospheric vicissitudes. Avoid crowded schools, excessive study and sedentary habits. Adenoids

and enlarged tonsils should be removed to allow full and easy breathing.

Bedrooms and living rooms occupied by persons with tuberculosis must be thoroughly fumigated and disinfected before they are used by others.

ASTHMA

This disease is a spasmodic affection of the lungs which comes on in paroxysms, generally at night, and is attended by difficult respiration, short, dry cough, tightness across the chest, a wheezing noise, inability to lie down, etc. These symptoms may continue for several hours at a time and the attacks may occur very frequently or be separated by intervals of weeks or months. Repeated attacks often develop pulmonary disease.

Although asthma is not usually seen before puberty, I have met with several cases among small children. When once developed it is apt to reappear at irregular intervals during the lifetime of the patient.

The symptoms are too familiar to require any description.

The causes are obscure and varied. That which brings on an attack in one subject may have no influence whatever on another. Atmospheric vicissitudes, overloaded stomach, inhalation of dust, certain odors, etc., may bring on an attack, and nasal catarrh, adenoids and enlarged tonsils are frequent exciting causes. Some persons will be entirely free from it while in certain localities, and be attacked again as soon as they depart. I know one man who would be entirely free from the disease while he remained at home in Saratoga Springs, but if he went even ten miles from home, he would be sure to have an attack, and if during the

attack he returned home, when within a mile or two of home would experience perfect relief.

The treatment is empirical. Remedies without number have been advocated to be tried and discarded. Change of climate is often serviceable, but no climate will furnish immunity for all, or even a majority. The climate which one asthmatic finds beneficial will be of no advantage to another.

During the late war I knew several soldiers who were entirely free from it while in Virginia, but the disease returned on coming home.

If I had an asthmatic child I would seriously consider a change of climate for its benefit, and would expect to have to go a long distance to get the greatest benefit by the removal.

Chronic bronchitis and nasal catarrh, co-existing with asthma will be likely to defeat any plan of treatment that does not consider *their* cure. I have seen the asthma yield readily after these complications had been overcome. Any plan of treatment should include the correction of all co-existing diseases.

Adenoids and enlarged tonsils should be removed. When the attack is caused by an overloaded stomach or indigestion, an emetic should be given.

Temporary relief may almost always be afforded by inhaling the fumes from burning niter, and strammonium, or belladonna leaves. Mix one fourth pound of coarse powdered strammonium leaves and one pound of nitre, burn a tablespoonful of the mixture and inhale the smoke; repeat if necessary. This may be varied by using half strammonium and half belladonna leaves to the same proportion of nitre. Blotting paper soaked in a strong solution of nitre, dried and burned, is also

effective. These substances furnish the basis for all the cigarettes, smokes, pastiles, etc., now in use.

The California plant grindelia, combined with other remedies to suit the peculiarities or complications of the different cases, has proved beneficial in many instances. The following will usually afford temporary relief:

Tincture of Bloodroot, . .	¼ ounce
Tincture of Lobelia, . . .	½ ounce
Bromide of Potash, . . .	½ ounce
Simple Elixir, . .	to make 4 ounces

Mix. Dose—For an adult a teaspoonful every half hour or hour till relieved or nausea is produced. Smaller doses for children. This is an excellent though nauseous remedy. Some find pretty large doses of quinine capable of cutting short an attack.

Attention to the bowels is necessary. A cathartic dose of podophyllin or a compound podophyllin pill taken at the commencement will often modify an attack.

Measures for a permanent cure, if undertaken, must be persevered with for a considerable length of time, and are to be continued during the intervals as well as during an attack.

WHOOPING COUGH

This is a disease peculiar to childhood, but is sometimes witnessed in adults. It is contagious and prevails as an epidemic, uninfluenced in its occurrence by season; rarely attacking an individual more than once, which is generally the first time they are exposed to its causative influence, though cases are known where it has reappeared a second and even a third time.

It is due to a specific poison which appears to be communicated directly from one child to another, yet it is presumed that some peculiar atmospheric condition is favorable to its propagation and is the principal

means by which it is spread. Be this as it may, there is plenty of evidence for and against this theory, but, as no good can well result to the nonprofessional reader from its discussion, it will be omitted.

It generally runs a regular course, lasting from six to ten weeks, and were it not for the complications liable to develop during its course would seldom or never prove fatal. Spasmodic cough, bronchitis, etc., often continue for a long time after the specific disease has run its course.

Whooping cough is essentially a nervous disease, usually milder in warm than in cold climates and is less severe when it occurs during warm weather.

Symptoms.—The disease may be divided into three stages: the *catarrhal*, the *spasmodic* or *paroxysmal*, and the *stage of decline*.

The first or catarrhal stage is very similar to an ordinary cold, accompanied by slight fever, languor, loss of appetite and restlessness with more or less cough. Sometimes these symptoms are severe and in other cases pass unnoticed.

After a week or two, the second or spasmodic stage appears. The fever abates, and the cough which has gradually developed becomes peculiar, persistent, spasmodic and characterized by a loud, shrill inspiration or *whoop* which gives the disease its name. The cough comes on in paroxysms, varying in frequency from once or twice a day to as many times an hour. When a fit of coughing comes on, the child instinctively grasps something for support or runs to its mother for protection, but returns to its play when the paroxysm is

ended. During the paroxysm, which may last from a few seconds to several minutes, there is a rapid succession of short, spasmodic coughs, succeeded by the prolonged inspiration or whoop, during which the face becomes red, turgid and bloated, the blood vessels distended and the eyes prominent. The paroxysm often terminates in vomiting or the expulsion of a thick tenacious mucus.

This vomiting may be so serious as to materially interfere with nutrition, by causing the child to vomit so soon after eating as to prevent the digestion and assimilation of its food.

This stage—the *spasmodic*—lasts from three to eight weeks, when it gradually subsides, passes into the third stage—*decline*—and terminates in recovery, unless some serious complication, such as pneumonia, hemorrhage, convulsions or diarrhœa has been developed.

In the first stage the expectoration is a frothy mucus. In the second it is transparent, yellowish, possibly purulent, ropy and tenacious. In the third it becomes less tenacious, slightly opaque, diminishes in quantity and disappears.

Sometimes this expectoration is so ropy it cannot be drawn out of the child's mouth with the fingers. When it is so very tenacious and in feeble children they may be aided by grasping it with the corner of a napkin and drawing it from the mouth and air passages.

TREATMENT.—It is questionable if treatment ever does more in whooping cough than to palliate and

modify the symptoms and prevent or control complications. Unless it is prevailing in the neighborhood as an epidemic, it will be impossible to distinguish the first stage from other catarrhal affections. When suspected give:

Tincture of Aconite, . . .	5 drops
Tincture of Belladonna, . .	5 drops
Water, ...	4 ounces

Dose—A teaspoonful every hour or two. If the cough is harrassing, add to the foregoing prescription half a dram of the tincture of drosera and give in the same way as before.

Keep the child with whooping cough away from school, and from other children and in a room where the air is pure and the temperature even. Give light, nourishing food and keep bowels regular. Keep chest anointed with camphorated oil. A strong tea or infusion of chestnut leaves sweetened to the taste and given in doses of one or two tablespoonfuls five or six times a day sometimes exerts a wonderful control over the disease in the first and second stages. The earlier it is given the better. If the leaves cannot be obtained, the fluid extract which can be got at nearly all drug stores may be given in five or ten-drop doses in water and repeated as often as the infusion.

A tea of red clover blossoms has long been favorably known in rural districts and may be given freely, sweetened or not. Sometimes it will cause looseness of the bowels. I have seen it control other forms of spasmodic cough very promptly.

If the child vomits soon after eating, it should be given another meal. In infants the milk should be well diluted.

The wearing of an abdominal binder seems to check the vomiting in many cases. The following remedy often proves helpful:

Fluid Extract of Belladonna,	5 drops
Fluid Extract of Lobelia,	30 drops
Water,	4 ounces

Given in teaspoonful doses every hour or two to children under five years will often afford decided relief from the spasmodic efforts. If taken too freely it causes vomiting, and is therefore objectionable to some.

Antipyrin and codeine prescribed by the physician in doses suitable to the age of the child are excellent remedies.

The following is an old fashioned remedy that often answers well when others fail:

Cochineal,	10 grains
Bicarbonate of Potass,	1 dram
Fluid Extract of Belladonna,	10 drops
Syrup,	4 ounces

Dose—A teaspoonful three or four times a day.

It has been my experience that remedies that relieve very effectually, some years, have very little influence in others. I do not pretend to explain this observation.

I have found the following very efficient during two epidemics occurring in the fall and winter:

Bromide of Potash,	2 drams
Fluid Extract of Veratrum,	10 drops
Fluid Extract of Black Cohosh,	1 dram
Syrup,	4 ounces

Mix and give a teaspoonful four times a day. It speedily modifies the spasms, controls the bronchitis and relieves all the symptoms. Belladonna in equal proportions may be substituted for the veratrum if relief is not obtained in two or three days. This may be given at the same time the infusion of chestnut leaves is employed, giving the doses an hour or two apart.

Name of Disease	Period of Incubation	Day on which Eruption or Rash Appears	Duration of Eruption	Length of Quarantine
Scarlet Fever	1 to 8 days, usually 3 to 5	1st or 2d day	7 to 10 days (not including desquamation)	6 weeks, or until desquamation is complete
Measles	10 to 14 days	4th day	5 to 10 days	3 weeks
German Measles (Rötheln)	7 to 18 days, or even longer	1st or 2d day	3 to 5 days	3 weeks
Diphtheria	2 to 10 days			3 to 4 weeks, or until bacteriological examination of cultures from throat are negative, i. e., no longer show bacilli of diphtheria
Chicken Pox	10 to 16 days	1st day and 3 following days	7 days or less	3 to 4 weeks, or until every scab has fallen off
Small Pox	10 to 14 days	3d day of fever	14 to 21 days	4 to 8 weeks, or until every scab has disappeared
Mumps	7 to 21 days			3 to 4 weeks, or 1 week after all swelling has subsided
Typhoid Fever	7 to 21 days, usually about 14	7th or 8th day	About 20 days	About 6 weeks, or until every symptom of the disease has vanished
Whooping Cough	7 to 14 days			6 to 8 weeks, or until the characteristic whoop has not occurred for at least two weeks
Erysipelas	3 to 7 days	1st or 2d day	4 to 6 days, but may last several weeks if the disease continues to spread	So long as any symptom of the disease lasts

Two or three days is usually long enough to determine whether a remedy is going to do good or not and, if no improvement is apparent in that time, something else may be tried.

If there is decided determination of blood to the head, the head hot, with dizziness, extreme suffocation, the expectoration stringy and profuse, I would use the last named prescription with a good deal of confidence.

MUMPS

This is an inflammation of the parotid glands, situated just under the ear, hence the name *parotitis*. The salivary glands under the jaw are also at times affected. It is a contagious disease and usually occurs in childhood, and when both sides have been affected it rarely returns. We often see cases where only one side has been affected. In these cases, perhaps years afterwards, the individual may have another attack which will be confined to the opposite side. It usually occurs as an epidemic and appears in from five to twenty days after the exposure. Children under three years of age are rarely affected.

Symptoms.—There is more or less febrile disturbance, chilliness and sometimes vomiting, followed in from twelve to thirty-six hours by a pain under the corner of the jaw, sometimes extending into the ears. Soon after the advent of the pain a swelling begins that sometimes attains an enormous size. This swelling generally reaches its greatest size on the fourth or fith day, when it remains stationary for a day or two and gradually declines, so that by the twelfth day it has entirely disappeared. It may involve both sides simultaneously, or may disappear on one side first and, about the time of its disappearance on this side, attack the other.

An old fashioned domestic diagnostic symptom that appears to be ignored by the profession was to have the suspected individual eat a pickle or some acid substance when, if it caused severe twinges of pain running into the swollen gland, it was pronounced mumps without any further ado.

A peculiarity of this disease is that the inflammation is liable to suddenly disappear from the neck and appear in the testicles of the male or the breasts or ovaries of the female, more especially if the afflicted person "catches cold" during the progress of the malady. Serious consequences, amounting to impotence or sterility, sometimes occur by this metastasis, as it is termed.

TREATMENT.—We have no remedies that do more than modify the severity of the disease, and many persons, particularly when the attack is mild, do nothing at all further than to remain indoors and, perhaps, take a few extra precautions against taking cold.

The food should be liquid and the mouth frequently cleansed with an antiseptic mouth wash (one teaspoonful of listerine in half a glass of water). A mild laxative may be given if the bowels are sluggish. Apply hot fomentations or poultices to the neck. A poultice of common beans cooked till nearly done, bruised and applied is excellent, or the swollen gland may be smeared with camphor liniment and covered with flannel. If the febrile symptoms are severe, give:

Tincture of Aconite, . . .	10 drops
Water, ...	4 ounces

Dose—A teaspoonful every hour or two. If the swelling is severe, add to the aconite and water half a dram of the saturated tincture or fluid extract of poke root (phytolacca decandra) and take it as before.

Aconite is *the* remedy, and if properly pushed and proper care exercised to guard against cold it is rare that suppuration or metastasis to other glands will occur.

Should it disappear from the neck suddenly, and attack those other parts mentioned, keep on with the aconite and phytolacca and also give in alternation:

Tincture Pulsatilla, . . . 15 drops

Water, ... 4 ounces

Dose—A teaspoonful every two to four hours between the doses of the other. Apply to the swollen parts, as warm as it can be borne, a solution of muriate of ammonia in water, an ounce in a pint of water.

Rest in the recumbent position under such circumstances should always be enjoined, and the swollen parts carefully supported instead of being permitted to hang down.

To secure rest and if the pain is severe a dose of Dover's powder proportioned to the age of the patient should be given.

When the gland suppurates it should be opened by the physician. This will be better than to endure the pain and suffering for many days, waiting for the forming abscess to break itself.

Every case of mumps should be isolated or quarantined for at least three weeks.

SORE THROAT

This is a very common complaint and we meet with numerous cases that do not admit of the customary classifications; as they are neither diphtheria nor quinsy they are too often ignored.

We might perhaps satisfy sticklers for names if we include all these cases under the one general classification—*pharyngitis*, but, after all, it is "sore throat." Sore throat is often an accompaniment of other diseases.

There are several varieties of the affection depending for the most part upon atmospheric conditions resulting in colds as the exciting cause. The predisposing causes are catarrh of the head and throat, impaired constitutional vigor, venereal taint, and many persons acquire a habit of having a sore throat on exposure to cold, damp, changeable weather, etc. Diphtheria, quinsy, laryngitis, etc., often leave behind them a tendency to sore throat. When a person has once suffered from a severe sore throat, future attacks are to be feared.

Chronic sore throat is very prevalent.

Symptoms.—The symptoms vary according to the cause and peculiarities of the patient. The throat is tender, inflamed and sometimes ulcerates. During an inflammatory attack there is chills and fevers, hoarseness, a desire to swallow often or clear the throat, the mucus membrane may be bathed in a profuse glairy mucus or it may be dry, irritable and husky. The natural color may be changed to an intense red, varying to a dusky or livid. The whole pharynx may be swollen, and if there is a tendency to ulceration the breath becomes exceedingly offensive, and examination reveals small ulcers or cankers which may run together and produce extensive sores.

Usually these sore throats are very annoying, and when neglected are apt to become chronic, and by extension downward along the mucus membrane into

the lungs or stomach are apt to give rise to serious consequences.

The treatment must be varied to suit the conditions that present. If of the inflammatory variety, the throat red and swollen, pulse accelerated and there are general

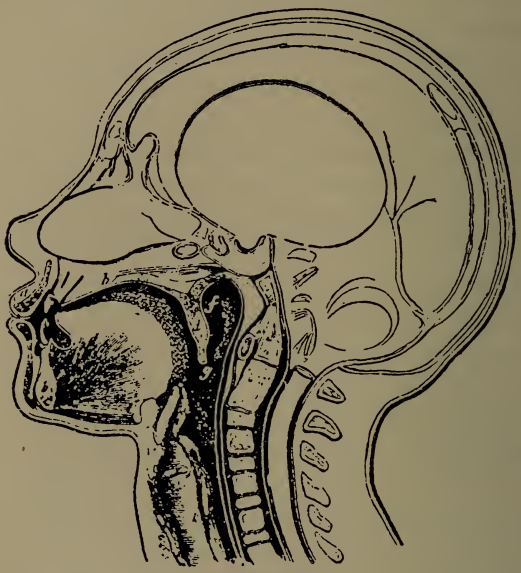


Figure 36

febrile symptoms, *aconite* is pre-eminently the remedy, whether the patient is a child or an adult. It may be given in combination with *belladonna*. Put five drops of each in half a goblet of water and take a teaspoonful every hour.

Then give chlorate of potash as a gargle and permit a little of it to be swallowed every three hours. A teaspoonful of the crystals in half a goblet of water is about the

proper strength. The compressed tablets of chlorate of potash which can be got at any drug store are more convenient, as they can be carried in the vest pocket and dissolved in the mouth and swallowed slowly as they dissolve. The dose for children may be one fourth to one half a tablet, or two or three grains every two or three hours.

If the breath is offensive, give a grain or two of the second trituration of the red iodide of mercury, or *pink* powder as it is often called. It comes the nearest to being a specific in the majority of cases of "sore throat" yet discovered and is specially valuable when the breath is offensive, though, if there is inflammation, never omit the aconite.

Those subject to an attack of sore throat with every change of weather should carry a vial of aconite pellets and a box of tablets with them for use at once.

These remedies are always appropriate even in those cases where the predisposing cause is catarrh or syphilis, but a complete course of treatment to completely overcome these constitutional affections must be instituted in the interval, depending only on the remedies above named for the relief of acute symptoms.

Sprays are better than gargles and the following will be found excellent when the throat is cankered or ulcerated:

Peroxide of Hydrogen, . .	2 ounces
Aqueous Extract of Witch Hazel,	2 ounces
Cinnamon Water, . . .	2 ounces

Directions—Use as spray to throat every two hours by means of an atomizer.

Wet packs about the neck, gargling the throat with very hot water or equal parts of hot milk and water

facilitate the cure, but of course are to be used only when the patient remains indoors. Frequent bathing the neck with cold water or whisky and water *on the outside* is beneficial in overcoming the sore throat habit.

In chronic sore throat there is generally an impaired condition of the general health that demands aid for the reparative powers of nature by appropriate remedies as well as the employment of medicines for the local symptoms.

QUINSY

Quinsy or *tonsilitis* is, as the name indicates, an acute inflammation of the tonsils, implicating the uvula, soft palate and throat generally. One or both tonsils may be affected at the same time. It sometimes terminates in suppuration, requiring to be opened with the knife, or perhaps breaks and discharges the matter itself.

The causes are cold, change of temperature, damp, wet feet and all the usual causes of colds. Rheumatic persons are most liable to it.

Symptoms.—At first there is a soreness or stiffness of the throat, with heat and often pain. There may be chills which will be succeeded by fever. The throat is dry, hot and swollen and swallowing becomes difficult and every attempt is attended by excruciating pain.

The uvula is enlarged and elongated; the end dropping down into the throat occasions a sensation as if some foreign substance was lodged in the throat, causing frequent attempts at swallowing and giving rise to much irritation.

On examination, one or both tonsils are seen to be swollen, the uvula elongated and the whole throat unnaturally red and shiny. The pulse is rapid, the tongue

furred and the bowels usually constipated. The pain from the inflamed tonsils often extends into the ears.

As the disease advances, the difficulty in swallowing increases to such an extent sometimes that on attempting to swallow fluids they are expelled through the nose. The speech becomes indistinct and the thirst is great. These symptoms all vary in severity.

The symptoms described may continue from five to twenty days, and may gradually subside, or they may terminate in suppuration of the affected tonsil. The formation of matter is indicated by a throbbing pain, sometimes accompanied by a chill. This throbbing continues until the swollen gland is opened or breaks itself and a free discharge of matter takes place, when the swelling is suddenly reduced and all the symptoms subside and rapid recovery takes place.

Sometimes during the disease the tonsils are covered with little ulcerated patches and may be mistaken for diphtheria. Sloughing may take place, particularly in those whose constitutions are previously much impaired.

Both children and adults are subject to the disease.

TREATMENT.—One of the first remedies to be thought of is aconite, five drops in half a goblet of water and a teaspoonful given every hour. It may be combined with phytolacca with benefit, thus:

Tincture Aconite, . . .	5 drops
Fluid Extract Phytolacca, . .	15 drops
Water, ...	4 ounces

Dose—A teaspoonful every hour or two.

If this prescription is given at the outset, it will be likely to cut short the disease. Alternate it with:

Tincture of Hyoscyamus,	30 drops
Water,	4 ounces

Dose—A teaspoonful every two to four hours, between the doses of aconite. Larger doses for adults.

I do not remember ever having seen hyoscyamus recommended in quinsy, but I have used it in a number of cases with most gratifying results.

A cathartic is always demanded. A seidlitz powder or a dose of salts may be given or, what is better, podophyllin and leptandrin, one tenth of a grain each for a child, one half grain each for an adult and repeat in twelve hours if needed; let it be taken at night, as a rule, the saline in the morning.

If the pain is so severe as to prevent sleep, a small dose of Dover's powder may be taken at bedtime. An ice bag or hot poultices applied to the neck are beneficial and inhaling the vapor from an infusion of hops and vinegar sometimes affords marked relief. The peroxide of hydrogen spray mentioned on page 345 will be found very helpful. Small pieces of ice to suck may be given. The food should be liquid and not too hot. Antirheumatic remedies, salicylate of sodium or aspirin should be given to those who are rheumatic..

Frequent attacks are liable to result in a permanent enlargement of the tonsils and give so much annoyance that an operation for their removal becomes necessary.

DIPHTHERIA

Diphtheria is an exceedingly grave malady in which we have a profound constitutional disturbance accompanied by a severe affection of the throat, characterized

by the development of patches of false membrane developed more or less extensively on the mucous membranes of the throat and air passages.

The cause of diphtheria is a germ—the Bacillus Diptheriæ. It is a contagious and infectious disease, and often prevails as an epidemic, though isolated cases are occasionally seen. As a result of overcrowding, it is more common among the poor.

Diphtheria is no respecter of person, age, condition, rank or temperament. Whole families are sometimes destroyed, although children under ten years furnish the greater percentage of its victims.

The symptoms vary in different cases from a mild sore throat to the most serious and malignant blood poisoning. Between these extremes we meet with every grade of intensity. The exudation of "false membrane" is the most certain diagnostic sign.

There may be premonitory symptoms, as languor, dullness, fretfulness, thirst and impaired appetite, but they are apt to pass unnoticed. These may last two or three days, when there will be chilliness sometimes amounting to a severe chill, succeeded with feverishness, headache, backache and, in some cases, rheumatic pains, with derangement of the skin, kidneys and bowels.

There may be a stiffness of the neck, heat and irritation in the throat at the outset, but usually the throat is not complained of until the fever is developed. On examining the throat it will be found somewhat swollen, of a red or livid hue, at first covered with a glairy mucus, soon to be followed by ashen gray spots on the membrane, which are usually grouped together in

clusters, becoming more numerous as the disease advances and, coalescing, extend over large surfaces, presenting the peculiar ashen gray wash-leather appearance characteristic of the disease. This peculiar exudation may take place upon the surface of any mucous membrane in the body. It frequently extends upward and lines the nasal cavity (nasal diphtheria) and downward into the larynx (laryngeal diphtheria or true croup) and trachea, seriously endangering life by suffocation, or it may extend downward along the esophagus into the stomach and bowels and has extended the whole length of the alimentary canal.

There is more or less fever, usually typhoid in character. The pulse varies from rapid and full at first to feeble; or it may be slow and feeble at the outset. The temperature is frequently very high.

The saliva is thick and tenacious and difficult of removal, the breath offensive, the teeth become covered with sordes and the lips black and parched. After two or three days the exudation is liable to become detached, leaving the surfaces beneath raw and extremely sensitive, so that the attempts at swallowing or even breathing are exceedingly painful. The more extensive the patches of membrane are the greater the difficulty of detaching them will be, and as one edge becomes loosened before the rest it may be heard to flap back and forth with each respiration with a noise well calculated to occasion anxiety. The denuded surfaces may ulcerate, and foul, unhealthy sores replace the "false membrane."

In mild cases when the membrane has not yet been formed it may be mistaken for catarrhal sore throat, but in all such cases, particularly if diphtheria be

prevailing in the neighborhood, the great depression of the system is sufficient cause for alarm and suggestive of immediate action.

In some cases an eruption has appeared upon the skin so nearly resembling scarlet fever that many have been led to regard the two diseases as identical.

Sometimes in the beginning of the severer forms of the disease the patient will be attacked with vomiting of a yellowish watery fluid; this may be followed by a purging of a matter similar in character. After a painful restlessness the patient may sink into a stupor or unconsciousness, which may be again replaced with delirium and all the powers of life rapidly fail.

In fatal cases death may occur from blood poisoning, the patient gradually sinking, but more often it is occasioned by the sudden formation of heart clots. Suffocation is also a frequent form of death, when there will usually be a gradual decline, the patient becoming unconscious and comatose before the end, owing to the accumulation of carbonic acid in the blood.

When the disease terminates favorably a marked improvement in all the symptoms generally takes place from the fifth to the tenth day. The swelling of the throat subsides and the patches of false membrane cease to re-form, as the different portions become loosened and are thrown off. The local discomfort gradually disappears and the general symptoms rapidly improve. The temperature permanently becomes natural, the appetite returns, the skin and kidneys resume their natural functions and, with the exception of the muscular weakness, the invalid feels quite well.

The danger, however, is not yet entirely over, for relapses frequently occur, with a new formation of

false membrane and a return of the most serious symptoms; or there may be a clot formed in the heart with a sudden failure of its action and death by fainting result; and even when there is an escape from these contingencies at a later period there may occur diphtheretic paralysis. It is well, therefore, that the convalescence be well guarded and care taken against all ordinary exertion and exposure for some little time after the symptoms have disappeared.

LARYNGEAL DIPHTHERIA

This variety of diphtheria is also known as membraneous or true croup and, as it is by far the most dangerous form of the disease, it is very important that it be recognized as early as possible and prompt measures taken to avert its consequences. As a rule, it comes on gradually and results from an extension or spreading of the diphtheretic process from the throat to the vocal cords. It is recognized by a persistent harsh, croupy cough, often occurring in paroxysms at any time of day or night; dry, stridulous whistling breathing, hoarseness or loss of voice. During the fits of coughing, tough gray pieces of membrane are often expelled. The face is pale and anxious, the breathing labored and there is retraction of the soft parts at the sides of the chest and above the breastbone. As the obstruction to breathing increases, the child becomes restless and tosses and struggles for air, the wings of the nose expand, the veins become distended, the lips and fingertips blue, the skin covered with cold sweat, the pulse weak and rapid, the extremities get cold and the child falls into a state of semi-stupor that steadily increases until death occurs.

TREATMENT.—It is folly to advise that the management of so grave a disease be undertaken without the attendance of a physician and, though such be the case, in view of the conflicting opinions, I will venture to describe such treatment as has served me best.

If possible, the patient should be put into a clean, dry, well aired bed in a good-sized, well ventilated room, stripped of all unnecessary furniture and draperies and a sheet put over the door. The room should be one that can be kept at a moderate temperature. Exclude everyone from the room not necessary for the care of the sick person and thus prevent as much as possible the spread of the malady. Disinfectants should be employed about the room and are not only beneficial to the patient, but afford a certain degree of protection to the attendants. Chloride of lime may be used for the purpose, exposed in dishes and occasionally a little vinegar poured upon it. Under the direction of the physician a little sulphur may be burned in the room, care being taken that the sulphurous acid gas disengaged does not become so dense as to cause suffocation of the patient.

We must maintain the vital powers by all the means at our command. Nutritious and stimulating food is necessary from the commencement—beef tea, mutton tea, milk, eggs, wine whey, milk punch, etc. If milk disagrees, the addition of a little lime water will usually overcome the objection. Repeat or alternate these articles so that every two or three hours some nourishment is given.

As soon as diphtheria has been diagnosed, or even strongly suspected, the physician should administer a dose of antitoxin.. The value of this agent has been

demonstrated and proved in so many thousands of cases that it should be given without delay, and repeated if necessary. Every child that has been exposed to the disease should receive an immunizing or protecting dose of antitoxin.

The peroxide of hydrogen spray mentioned on page 345 may be used every two hours with an atomizer.

Small pieces of ice to suck will often prove grateful to the little patient.

Infants with diphtheria should not nurse from the breast, but the milk should be pumped out and fed from a bottle.

Fumigations of calomel may be ordered by the physician.

Stimulants are often needed. Infants under one year will need from one quarter to one half teaspoonful of whiskey in water every three hours; children over two years a teaspoonful at the same intervals.

The child should be kept quiet on its back and not allowed to toss or struggle, as the extra exertion may prove too great for the heart.

In laryngeal diphtheria, antitoxin should be administered, but should the obstruction to breathing increase, intubation or tracheotomy will be necessary.

In nasal diphtheria the nasal cavities should be irrigated with warm solution of salt (one teaspoonful of salt dissolved in one pint of water).

CEREBRO-SPINAL MENINGITIS

This exceedingly fatal disease is also called *spotted fever* and consists of an inflammation of the cerebro spinal meninges (the membranes covering the brain and spinal cord). It is infectious and usually occurs as an epidemic, prevailing as a rule in circumscribed

localities and does not seem to be retarded by the best sanitary regulations. The young and vigorous as well as the debilitated and infirm are among its victims. But little is known regarding its cause.

Symptoms.—The symptoms vary according to the severity of the disease to such an extent that Stille has termed it the "chameleon-like disorder." The attack commences abruptly with lassitude and muscular pains, soon followed with a chill, intense headache, vomiting, dizziness and great prostration. There may be mental excitement amounting to delirium, but this gives way sooner or later to depression and a disposition to sleep, or unconsciousness. At first, there is intolerance of light and sound to be replaced later on by insensibility to both. The greatest suffering is from the pain in the head and spine. A curious symptom is that when the patient is insensible a slight pinch or even the attempt to open the eyelids will call out an expression of pain.

The muscles of the neck, back and extremities become painful and rigid, the head drawn backward and the back curved so that the body describes the arc of a circle. The face is pale and shrunken, the features pinched, indicative of great suffering. Muscular twitchings occur and, in some cases, general convulsions. The surface of the body is very sensitive to the touch, and a slight motion sometimes will be sufficient to excite a spasm. When the finger is drawn over the skin a red line remains—the tache cerebrale.

Some little time may be consumed with these symptoms, so that the disease may not reach its height for three or four days, but in the severer forms of the malady the patient is suddenly stricken down with a chill

and dies in a few hours without showing any signs of a reaction. In such cases the chill is speedily followed by a rapid sinking of all the vital powers, the skin becomes blue and cold, the blood settles in blotches under the skin in various parts of the body, perhaps oozes from the nose, gums, mouth and skin, and there is a short period of delirium followed by a stupor from which the patient never revives.

So rapidly may the disease do its work that the characteristic bending backward may not occur, and I have seen cases in which the blood spots did not appear till after death.

In mild cases, the muscular pains, headache, stiffness of the muscles, fever, etc., may be present two or three days and then gradually disappear without the development of the other symptoms.

When recovery does take place, there may be a long period of great nervous irritability, feebleness, together with more or less perversion of all the faculties.

Fatal relapses sometimes take place after several weeks of apparently satisfactory convalescence.

Treatment.—Great diversity of opinion prevails in regard to the proper treatment of cerebro-spinal meningitis, and no suggestions I may offer should be permitted to take the place of professional attendance. The variable character of the attack necessitates the best judgment in the selection of remedies. In the severer cases, all our efforts seem powerless.

Flexner's serum has robbed this disease of all its former terror and is to cerebro-spinal fever what antitoxin is to diphtheria. The physician should inject the serum into the spinal canal as soon as the disease has been diagnosed.

The application of heat to the back of the neck and spine is a measure recommended by good authorities, and may be managed by cloths wrung out of hot water, or hot bottles of water. This should be frequently repeated and often gives decided relief. Ice bags applied to the spine usually feel more grateful and give better results.

Attention to the bladder should not be forgotten. This organ is often paralyzed and will need measures for its relief. Heat placed over the lower abdomen will sometimes succeed, but, if it fails, a catheter must be used.

Prostration must be combatted by stimulants, among which ammonia, capsicum and alcohol are at the head. But little can be said as to the dose. It must be governed by the effect and, while they do good or improve symptoms, they may be pushed, but many times they will produce but a transitory effect or no result at all.

From the commencement, a good nutritious diet must be given. Beef essence, animal broths, eggs, milk, milk punch, etc., should be given, alternating so that some nourishment is administered as often as once in three hours. Stimulants, as already remarked, are to be given cautiously.

During convalescence, tonics are necessary and may be given for a considerable length of time.

SMALL POX

Small pox or *variola* is an eruptive fever, propagated by a specific contagion, running a definite course, rarely attacking a person more than once, though cases are on record where it has attacked individuals twice and even three times. It is caused by exposure to a

small pox patient during the pustular period, or from excrementitious matter thrown off during the disease. How long this matter retains its infectious character is unknown, but it is certain that it may be conveyed in the clothing or otherwise a long time after these media have been exposed to the contagious material.

Symptoms.—After exposure to the contagion, a period of incubation, varying from seven to eighteen or even twenty days—usually about twelve—elapses before any special indications of the disease appear. Then there is headache, lassitude, mental depression and a severe chill, or perhaps several chills in succession. Fever develops with nausea and vomiting, intense pain in the back and legs, the headache becomes more severe, the mind confused, which may amount to delirium. The pulse is rapid, the tongue coated and the breath offensive, the throat sore and eyes bloodshot. In young children, convulsions are apt to occur before the eruption comes out. The fever continues high until the eruption appears, which will be from the end of the second to the fifth day.

The eruption, which is the diagnostic mark of the disease, first appears on the forehead and scalp, about the eyes and mouth and then extends to the body and extremities.

When the eruption is delayed till the fourth day and the pustules well separated from each other, the attack is likely to be mild and is called *discrete* small pox; but when it appears early and the eruption so close that the pustules run into each other, it is apt to be severe and is then termed *confluent* small pox.

The eruption first appears as small red pimples, which gradually become more prominent. These

pimples are at first hard, but disappear for a moment under pressure. About the third day, and sometimes as early as the second, there appears upon the top of these pimples a small vesicle containing a transparent fluid, in the center of which there will soon appear a small depression or pit. They attain their size about the eighth day after the attack, and the fluid in them then becomes opaque and in two or three days they begin to dry down and form scabs.

When the eruption has first appeared, there is a diminution of the fever, the headache and pain in the back and limbs are relieved, but return again about the seventh or eighth day and continue for a longer or shorter period, dependent largely upon the severity of the case and the amount of matter reabsorbed into the system; the chills and fever being due to the blood poisoning going on.

About the tenth or eleventh day the swelling of the face subsides and the hands and feet swell. There is now great itching, and the vesicles break and pour out a liquid matter that forms crusts that are the cause of the disfiguring pits.

In the severer forms the return of the fever is accompanied with intense pain in the head and back, with delirium, which may be so acute as to necessitate constant watching. Diarrhœa and intestinal hemorrhage sometimes occur during this stage.

In some cases the disease is so mild as to require little or no attention, while in others it is of the most malignant character, and the sufferer is reduced to a mass of putrescency. Between these extremes may be seen all grades of intensity.

TREATMENT.—Small pox has a regular course to run, and the object of treatment, therefore, is to mitigate its severity and guide it to a successful termination.

It is highly important to isolate the patient at once and maintain a rigid quarantine to prevent the spread of the disease. Every person who has been exposed to the disease should be vaccinated at once.

Secure a commodious, well ventilated apartment, where the atmosphere need not become loaded with the emanations from the patient, not too cold nor yet too hot, and maintain as nearly an even temperature as possible, and let the room be well disinfected by carbolic acid or other disinfectants freely sprinkled about.

Give the patient a warm sponge bath two or three times a day, in which a small quantity of carbolic acid is dissolved.

For two or three days before the characteristic eruption appears it will be difficult to determine the disease, unless it is prevailing in the vicinity or the patient is aware of having been exposed to it. As soon, however, as it is known that the disease is small pox, give:

Fluid Extract Veratrum, . .	10 drops
Fluid Hydrastis, . . .	30 drops
Water, ...	4 ounces

Mix, and to a child five years old give a teaspoonful every hour, lengthening the intervals as the fever subsides and increasing when the fever increases, and continue till the fever disappears. This will also control the stomach.

The internal use of carbolic acid is believed by some to be of value in diminishing the severity of the blood poisoning, and a drop in half a wineglassful of water may be given three times a day.

The *saracenia* or pitcher plant has acquired something of a reputation in this disease and is believed to materially lessen its severity. The infusion of the plant, an ounce steeped in a pint of water, and the whole taken in twenty-four hours, is regarded as the best mode of administration.

Should the condition of the bowels require a laxative, a seidlitz powder, calcined magnesia or some of the laxative mineral waters in appropriate doses may be given.

Pain, irritation and wakefulness may be so severe at times as to demand the use of opiates, when paregoric or tincture of opium or Dover's powder may be given in suitable doses to afford ease and sleep.

To prevent pitting, a great variety of plans have been tried, but the principle of them all is to exclude the air. The following is a good formula:

Carbolic Acid, ...	1 dram
Fluid Hydrastis, . . .	1 ounce
Glycerine, ...	5 ounces

Mix, and apply with a soft brush or camel's hair pencil, carefully avoiding breaking the pustules. Repeat the application several times a day as often as it partially dries. It will allay the troublesome itching and disposition to scratch.

Another method is to smear oil over the exposed skin and over it dust a powder composed of equal parts of bismuth subnitrate and prepared chalk.

From the first, a supporting diet must be given—beef tea, mutton broth, eggs, milk, oysters, etc.; and particularly is nourishment demanded at the time of the maturation of the pustules; at this period the use of milk punch, brandy or whisky sling should be used to support the vital powers and favor the process of pustulation. If the eruption strikes in suddenly, warm

drinks should be given, and milk punch or camphor sling made by putting three or four drops of the spirits of camphor into a cup of warm sweetened water should be repeated every three or four hours. In the severer cases, the eyes should be protected by darkening the room or covering them with a mask.

Diarrhœa may occur and should be treated with small doses of the neutralizing mixture and perhaps two to ten drops of the fluid extract of cranesbill, small doses of the tincture of cinchona, say five to ten drops for children every two or three hours, is well adapted to the necessity.

During convalescence, nourishment is usually of more consequence than medicine, except the hydrastis in two or three-drop doses, or the cinchona in five or ten-drop doses, three times a day, increasing the dose in adult patients proportionately.

VACCINATION

Every baby should be vaccinated when it is five or six months old, because successful vaccination is almost certain protection against small pox. The vaccination should be repeated in the tenth year and after that every five to seven years.

The outer side of the left arm is the place usually selected, but girls may, if preferred, be vaccinated on the thigh or leg. A shield should be worn as a protection until the sore has thoroughly healed.

CHICKEN POX

Chicken pox or *varicella* is a mild, contagious eruptive disease having some resemblance to small pox, but very much milder. An eruption appears—generally much scattered, principally on the body—as small red pimples, which in a few hours develop into vesicles,

and in rare instances become pustules. The rash first appears on the face and forehead and then spreads over other parts of the body. The pimples come in crops—new ones coming for three or four days. The rash may often be seen in the throat or mouth. In a day or two the vesicles dry up and scabs or crusts form that fall off in from five to twenty days; neither scar mark nor pitting is left, except occasionally after a very severe attack.

There is seldom any fever till the eruption appears, then the temperature raises somewhat and there may be headache, thirst, constipation, irritation of the eyes, severe itching, etc.

School children should be quarantined for three weeks, or until all scabs have fallen off.

But little or no treatment is necessary. If there is much fever, a mild laxative of citrate of magnesia and a few drops of aconite in a glass of water, given in teaspoonful doses every hour or two, is all that is necessary in the way of medicine. Itching of the skin can be allayed with carbolized vaseline. Infants should wear mittens to prevent scratching. A warm bath and precaution against taking cold should be employed.

MEASLES

Measles or *rubeola* is an acute contagious eruptive fever, due to a specific poison, propagated by contact with the sick or some article of clothing in which it may be carried long distances.

Measles prevail epidemically at any and all seasons, but most generally during cold weather, and is then most severe, attacking all ages, but principally the young. It seldom attacks a person more than once and

is apt to be more severe among adults than children. It is attended with a more or less serious inflammation of the mucous membrane of the respiratory organs, varying from a slight catarrh to a severe bronchitis or pneumonia.

Symptoms.—After a period of incubation varying from seven to fourteen days—generally about ten days—after the exposure, febrile symptoms accompanied by catarrh make their appearance. The early symptoms may not differ materially from a common cold; there are chills and fever, coughing and sneezing, discharge from the nose; the eyes become inflamed, sensitive to the light and watery; there is headache, the throat feels raw and there is hoarseness with thirst, disturbance of the appetite, etc. These symptoms vary greatly in intensity.

Usually on the fourth day from the beginning of these symptoms the characteristic eruption appears upon the face, in the edges of the hair and forehead, whence it extends to the neck, breast, body and extremities, reaching its maximum in thirty-six to forty-eight hours. The eruption then remains stationary two or three days, when it gradually disappears in about the order of its appearance, and by the eighth or ninth day is all gone.

This characteristic eruption appears as small dull or dingy red, slightly elevated circular spots resembling flea bites; at first separate with intervals of naturally colored skin between them, but soon run together in such a manner as to form crescent-shaped patches, slightly elevated above the surface of the skin.

Koplik's sign—a day or two before the rash appears, small, bluish white specks surrounded by a red areola,

may be seen on the mucous membrane of the cheeks and lips.

The symptoms described are sometimes varied and the eruption may appear out of its regular order. A person may wake in the morning after a restless night covered with the eruption without having noticed the early symptoms; or the "breaking out" may be delayed beyond the fourth day.

The only disease measles is likely to be confounded with is scarlet fever, but there are distinguishing features. The eruption of measles is darker than that of scarlet fever and gives the skin greater roughness; it being at first separate, then forming the crescent-shaped blotches, while the eruption of scarlet fever is usually in patches of a bright red color.

In measles the eruption appears later then in scarlet fever. In measles it is first seen on the face and forehead, in scarlet fever on the neck and chest. In measles the catarrhal symptoms are characteristic, except in very mild cases, but are rarely present in scarlet fever, though the throat is sore. These characteristics, though varying somewhat in different cases, will generally enable the reader to make a correct diagnosis.

During the development of the eruption, the fever is generally pretty high, and there may be delirium, but when the measles are well out it subsides, unless the bronchial irritation is so severe as to cause its renewal. When the eruption declines naturally, yellowish discolorations remain and the skin is thrown off in fine scales.

Sometimes the eruption is slow in coming out, or suddenly recedes after it has made its appearance, when the fever is likely to be greatly aggravated and the

bronchial irritation becomes a serious and troublesome complication. This often develops into pneumonia, which is liable to leave behind a pulmonary disease that may terminate in consumption. Ordinarily, measles are not a severe disease. Some years they are extremely mild, while in others the mortality is great.

When the eruption is very dark and the powers of life greatly depressed, malignancy being the type of the disease, it is often termed *black measles.*

TREATMENT.—As in all contagious diseases, the child should be isolated. The room must be slightly darkened on account of the condition of the eyes and the intolerance to light. Carbolized vaseline or washed lard will do much to allay the irritation or itching of the skin, and after the rash has disappeared warm baths should be given once or twice a day to assist the fine peeling of the skin. The eyes should be bathed night and morning with a weak solution (10 grains to the ounce) of boracic acid and the throat sprayed three times daily with one part listerine and six parts water. In mild cases very little medicine is required, a hot foot bath, a warm sponge bath and warm drinks, with extra precautions against taking cold from exposure to draughts may be all that will be needed. Care must be taken to prevent taking cold for some time after the disappearance of the eruption. If the fever is excessive, aconite is the remedy and may be given alone or in connection with the pleurisy root or asclepias, thus:

Tincture Aconite Root, . .	10 drops
Fluid Extract Asclepias, . .	2 drams
Water, ...	4 ounces

Dose—A teaspoonful every hour or two. This will not only modify the fever and induce moderate perspiration, but will materially aid in bringing out the eruption.

When the eruption is tardy in making its appearance I would add five drops of tincture of belladonna to the above prescription and give in the same way.

Should the cough require a remedy, give:

Tincture Ipecac, . . .	15 drops
Tincture Drosera, . . .	30 drops
Water, ...	4 ounces

Mix and give a teaspoonful every two hours, continuing the aconite.

Compound licorice mixture in doses of five to thirty drops (according to age) will relieve the cough.

The bowels should be opened with a soapsuds injection or a dose of castor oil or calcined magnesia.

Secure rest at night by a warm bath and, if necessary, a dose of Dover's powder adapted to the patient's age.

When the irritation of the lungs is great and does not yield to the foregoing, as will sometimes be the case, and a true bronchitis or pneumonia developing, the chest should be enveloped in warm fomentations or poultices or the oiled silk jacket. Then give:

Fluid Extract Lobelia, . .	½ dram
Fluid Extract Asclepias, .	2 drams
Syrup of Squills, . . .	4 ounces

Dose—One fourth to one teaspoonful every two to four hours, sufficient to afford relief, the dose to be varied according to age.

Throughout the disease the diet should be nutritious. Give broths, soups, milk, milk punch, tea, toast, cereals, soft-boiled eggs, crackers, zweiback, jelly will make a good diet. Orangeade and lemonade may be given in moderate quantities.

If the child complains of earache, notify the physician at once.

When all the symptoms are disappearing and the condition of the lungs does not require any special remedies I give tincture of pulsatilla, ten drops in half a glass of water in teaspoonful doses every two or three hours.

When there is great malignancy, supporting treatment is demanded, and milk punch, whisky toddy, beef tea, eggnog, etc., are called for.

GERMAN MEASLES

This is an acute contagious disease also known as Rubella, or Rötheln, that frequently occurs as an epidemic. The constitutional symptoms are mild; the rash or eruption usually well marked, sometimes resembling that of ordinary measles, at other times that of scarlet fever. It may attack the same child a number of times as well as those who have previously had measles or scarlet fever.

Symptoms.—For half a day the child may feel drowsy, be slightly feverish and complain of a little sore throat and watery eyes, but frequently the first symptom noticed is that the child when it awakes in the morning is covered with a rash. The eruption appears first on the face on the temple and cheeks and then spreads rapidly over the rest of the body. It consists of small reddish pimples, usually scattered, but on the face often forming blotches like that of measles. In other cases the eruption takes the form of a uniform reddish blush that closely resembles that of scarlet fever. The eruption lasts for two or three days, fades and disappears, sometimes with slight peeling or desquamation. The glands of the neck are usually enlarged and there may be some itching of the skin.

TREATMENT.—The disease is so mild that hardly any treatment is needed. The disease is contagious and the child should be kept away from other children for two weeks. Keep the bowels regular, sponge the body with tepid water two or three times a day. When the itching is severe, apply cacao butter or a bland oil to the skin.

SCARLET FEVER

Scarlet fever, *scarlatina*, or "canker rash," as it is variously called, is essentially a disease of childhood and rarely attacks a person but once. It is an acute infectious and contagious eruptive fever, characterized by a scarlet-colored eruption on the skin, associated with an inflammation of the throat. It is contagious from the outset of the disease to the end of desquamation or peeling and is communicated by contact or inhaling the exhalations of a person affected with it and may be conveyed in the clothing for long distances.

Physicians recognize three varieties of the disease, distinguished by its severity: the *simple*, the *anginose* and the *malignant*. Scarlet fever in any form is to be dreaded, for it is a treacherous malady; an attack slight at first may become severe as it progresses and terminate fatally, and mild cases are often followed after convalescence is established by a fatal disease of the kidneys; on the other hand, cases that are severe at the outset become milder as they progress and terminate in complete recovery.

SYMPTOMS.—After exposure to the contagion, four to eleven days intervene, when the attack begins suddenly with chills, more or less severe, languor, headache, high fever, rapid pulse, nausea and vomiting. Convulsions frequently replace the chills in young children.

The throat is sore, the tonsils swollen and inflamed. In twenty-four to forty-eight hours from the beginning, the characteristic eruption of the disease makes its appearance upon the neck and upper part of the chest, whence it extends over the rest of the body. There is rarely any rash around the mouth and chin and the pallor is in marked contrast to the rest of the face. In severe cases the eruption is delayed.

The eruption consists of numerous little points or spots of a bright scarlet color which diffuse themselves uniformly over the skin or appear in large, irregular patches. This vivid color of the skin disappears under pressure, but quickly returns when the pressure is removed.

At first the tongue is covered by a light yellowish coating through which numerous elevated points may be seen; about the fourth day this coating falls off, leaving the surface of the tongue raw and the elevated points swollen, giving it something the appearance of a large strawberry, from which we have "the strawberry tongue" of scarlet fever.

About the fifth day from the beginning of the attack the eruption begins to fade, and in a day or two—remaining longer in severe than in mild cases—it has entirely disappeared. The eruption is often attended by a troublesome itching; as it recedes, desquamation or peeling of the skin commences, first falling off in a minute scurf and later in large scales. This peeling lasts for two or three weeks, or even longer.

In the mild or *simple* variety the symptoms are mild, and the trouble of the throat is not severe, the eruption comes out early and is of a pale rose color and soon fades.

In the *anginose* form, all the symptoms are aggravated, the swelling of the throat is severe and swallowing very difficult. On examination of the throat, the tonsils are seen swollen, dark red and the mucous membrane presents more or less ulceration; the breath is offensive and there is an acrid discharge from the nose, and the glands of the neck are inflamed, often forming abscesses. The eruption is more general, and the whole body presents the appearance of a "boiled lobster."

The occurrence of the eruption gives no relief, but all the symptoms are apt to be aggravated. In this form the eruption does not follow the regular course, it does not come out so early and may soon recede; it often shows a tendency to recede and reappear, and the throat is likely to remain sore for some time.

In the *malignant* form we have all the severity of the anginose variety from the first, and a state of prostration soon develops that rapidly assumes all the characteristics of typhoid. The pulse is small, irregular, indistinct, soft and so rapid as scarcely to be counted. The eyes are a dull red, with intolerance of the light, the cheeks flushed and dusky and there is deafness and delirium or stupor. The eruption is very dark colored, comes out late and disappears again in a few hours.

The tongue, teeth and lips are covered with dark incrustations, the breath is exceedingly fetid, the breathing is rattling and laborious; swallowing exceedingly painful and difficult, sometimes the whole neck becomes a dark livid color, the throat sloughs and an offensive diarrhœa occurs. These symptoms are very likely to terminate in death on the second, third or

fourth day. This form of the disease, even under its most favorable circumstances, is extremely fatal.

Severe kidney complications may occur in any form of the disease, and attention to the secretion of the urine should never be overlooked, as entire suppression sometimes takes place. Other possible complications are swelling and suppuration of the glands of the neck, purulent inflammation of the middle ear, inflamed joints.

TREATMENT.—In the milder forms of the disease the objects of treatment are to modify the fever and promote the appearance of the eruption. The patient should be isolated in a large easily ventilated room, as far away as possible from the rest of the family; all unnecessary furniture and draperies should be removed; the air should be pure and the temperature about 68° F. A sheet wet with some disinfectant should be hung over the door and nothing must be allowed to leave the room unless it has been thoroughly boiled or disinfected. A tepid sponge bath repeated two or three times a day will materially aid in promoting the comfort of the patient by reducing the fever, and by assisting the peeling and preventing the scales from the skin from flying about will act as a preventive against spreading the disease. This bath may be rendered more efficacious by making it alkaline by adding a tablespoonful of saleratus or baking soda to each quart of water. Then give internally:

Tincture of Aconite Root, . .	10 drops
Tincture of Belladonna, . .	5 drops
Water, ...	4 ounces

Dose—A teaspoonful every hour or two as the fever is severe or mild.

Warm drinks, mint teas, warm lemonade or hot whisky sling in moderation are useful in bringing out the eruption.

In the *anginose* form, make use of the bath and warm drinks and give internally:

Fluid Extract of Veratrum, .	10 drops
Fluid Extract of Baptisia, . .	30 drops
Water, ...	4 ounces

Dose—A teaspoonful every hour.

Give two-grain doses of the second trituration of the red iodide of mercury every three or four hours and between the doses gargle the throat with the chlorate potash solution or, in its stead, gargle with the following:

Powdered Cayenne Pepper, .	1 teaspoonful
Salt, ...	2 tablespoonfuls
Cider Vinegar, ...	4 ounces
Boiling Water	to make 1 pint

Infuse and strain and use freely.

The pungency of this mixture will make it objectionable to small children, but its use is apt to be followed by speedy relief. Children too small to use a gargle may have the throat mopped out with a soft brush or sponge, but rough usage is not to be permitted.

As a spray to the throat use the peroxide of hydrogen formula mentioned in the treatment of sore throat, page 345.

If the bowels require unloading, an injection of soap and water or a dose of castor oil should be given.

A stimulating liniment applied to the neck on a layer of flannel is serviceable and the following answers well:

Hemlock Oil, ...	½ ounce
Olive Oil, ...	½ ounce
Spirits of Hartshorn, . .	½ ounce
Spirits of Camphor, . . .	½ ounce

Mix.

Anointing the entire body three or four times a day with vaseline or cacao butter does much good, allaying the troublesome itching and promoting the comfort of the patient. A ham or bacon rind is equally good if not better, though not quite so nice or fashionable.

If there be great prostration, stimulants may be required, when milk punch, eggnog, wine whey, etc., are the most desirable forms. If they quiet and strengthen, they do good, but if they cause delirium they do harm and should be suspended.

If there is great nervousness, give a few doses of:

Tincture of Chamomilla, . .	60 drops
Water, ...	4 ounces

Dose—A teaspoonful every two or three hours, timing its administration so as not to interfere with other remedies that are being given at stated intervals.

If the functions of the kidneys fail and the urine becomes scanty and thickens on being heated, give:

Acetate of Potash, . . .	2 drams
Tincture of Apis, . . .	15 drops
Water, ...	4 ounces

Dose—A teaspoonful every four hours in plenty of water.

Care must be taken to determine that instead of there being no urine secreted, the bladder be not overfull, having lost its power of evacuation. When this is the case, the bladder can generally be felt distending

the lower abdomen. A hot sitz bath may afford relief or a hot fomentation of hops on which a little spirits of camphor is sprinkled may be applied over the bladder. If these fail, instrumental measures will be necessary. The bedding of children too young to tell may be found wet and yet the bladder be distended with urine, that which dribbles away being in excess of the capacity of the bladder. Distinction must be made between *suppression*, or failure of the kidneys, and *retention*, or failure of the bladder to expel its contents.

In the *malignant* form of the disease, treatment is very uncertain and unsatisfactory, yet every effort must be made. Stimulants are to be given perseveringly, brandy, milk, beef tea, eggs, etc., and this medicine internally:

Tincture Rhus Tox, . . .	5 drops
Tincture Belladonna, . .	8 drops
Fluid Extract Baptisia, . .	1 dram
Water, ...	4 ounces

Mix. Dose—A teaspoonful every two hours.

Throughout the disease a nutritious diet should be given and alternated so that every few hours some easily digested nourishment is given, as beef tea, mutton broth, eggs, milk punch, junket, wine, soft toast, etc., etc.

Disinfectants should be exposed in the room, as chloride of lime, sulphurous acid gas, carbonic acid gas, carbolic acid, etc., as has been advised in diphtheria, small pox, etc.

Dropsical complications may occur after the subsidence of the other symptoms, usually about the twenty-first day, and seems most liable to follow those cases that have been mild. When it occurs, put ten

drops of apis and thirty drops of apocynum canabinum in a goblet half full of water and give a teaspoonful every four hours and alternate with ten drops of Fowler's solution in a like quantity of water, given in teaspoonful doses between the doses of the other.

The alcoholic vapor bath may also be used at the same time with a view to remove the dropsical effusion through the skin by perspiration.

During convalescence in the severer cases, tonics are needed, and the elixir of calisaya and iron in appropriate doses suits the requirements well.

It is perhaps needless to add that a physician be called at the outset who can watch the developments of the case and take advantage of conditions as they arise. I have detailed the treatment more particularly for the benefit of those who cannot have medical aid without delay, and as a guide in his absence and not by any means to supersede him.

ERYSIPELAS

This affection is a peculiar form of inflammation of the skin and tissues immediately beneath it, with a disposition to extend itself over large surfaces and accompanied by more or less severe febrile disturbance. It sometimes occurs as an epidemic, though isolated cases of the simple form are often met. It is an acute contagious disease due to a germ—the Erysipelas Streptococcus—that enters the body through a wound or abrasion of the skin. Facial erysipelas usually starts from a small wound at the edge of the eye, nose or mouth. In new-born babies it may start from the navel.

Symptoms.—In the simplest or superficial variety there may not be very general disturbance, the disease being localized on the skin. The skin inflames and is

attended by an intense itching or burning sensation, with redness, which so gradually merges into the surrounding tissues that it is almost or quite impossible to tell where it begins or ends. This simple form scarcely merits a description except to illustrate an extreme of the disease.

In the severer forms, in addition to the symptoms mentioned, there is a chill at the outset, though it may be slight, soon followed with fever, loss of appetite, headache, nausea and perhaps vomiting, and there may be stupor or delirium when it attacks the face or head. A sensation of intense heat is felt in the skin where the disease shows itself, stinging and itching and attended with a swelling or puffiness, with a vivid redness which in a little while assumes a purple hue. The swollen skin presents a glistening appearance and is very sensitive.

Erysipelas frequently attacks the face and head, though no part of the body is exempt. When it occurs in loose tissues like the eyelids the swelling is much greater than in tightly drawn tissues, but the latter are most painful. The swelling of the face is often extreme; the eyes may be closed and great deformity exist. Sometimes small blisters or vesicles appear on the affected surface. When the deeper structures are affected, abscesses form and typhoid symptoms are developed. The inflammation generally reaches its height in two or three days, and in a day or two longer gradually declines and the skin assumes a yellowish hue and peels off.

It often happens that when the inflammation has arrived at its greatest height at the point of its commencement it will spread to adjacent tissues before

it declines and in other instances advances in one direction as it declines in another, while at other times it leaves one point to attack another entirely remote. This form is known as migratory erysipelas. When situated on the head and face there is always danger of inflammation of the brain.

Its ordinary duration is from seven to fourteen days, but it may assume an erratic form and wander about, receding in one direction and spreading in another, keeping up its maximum severity.

TREATMENT.—Wash the inflamed part with Castile soap and water, then bathe with a 1 in 1000 solution of corrosive sublimate; dry with soft towel and apply white lead or the following salve:

Ichthyol, ...	2 drams
Vaseline, ...	1 ounce

Directions—Spread on inflamed part, cover with gauze, cotton or linen and hold with bandage.

It is well to give children five drops of the tincture of chloride of iron in a wineglass of water three or four times a day, however mild the case may be.

The use of iron as already described, alone or associated with quinine, is a very popular remedy with many physicians, particularly when the disease attacks persons previously debilitated.

When constipation is present, a laxative may be necessary, and a seidlitz powder, Rochelle salts, calcined magnesia, or even castor oil may be given. The diet must be nutritious and sustaining—animal broths, toast, tea, milk, etc., and, if the prostration is great, stimulants may be necessary. Cool or tepid sponging of the body will always allay fever and add to the patient's comfort. Let the hygiene be as thorough as

possible. During recovery, iron and calisaya makes an agreeable tonic.

NOSE BLEED—EPISTAXIS

Blows on the nose, picking at the nose, plethora, growths and ulcers, catarrh, are the most frequent causes of bleeding from the nose.

TREATMENT.—Pinching the nose between the fingers will sometimes stop the bleeding. Powdered alum, pure or mixed with an equal quantity of starch, blown into the nose, or a small piece of absorbent cotton or bacon fat inserted just inside the nostril will often check the hemorrhage. Peroxide of hydrogen, lemon juice or weak vinegar may be sprayed into the nose with an atomizer. Raising one or both hands above the head, a small piece of ice to the outside of the nose, a hard substance, like a marble or thimble, placed between the front teeth and upper lip are simple means that have often proved successful.

Solutions of adrenalin and antipyrin are excellent remedies often used by physicians.

DIARRHŒA

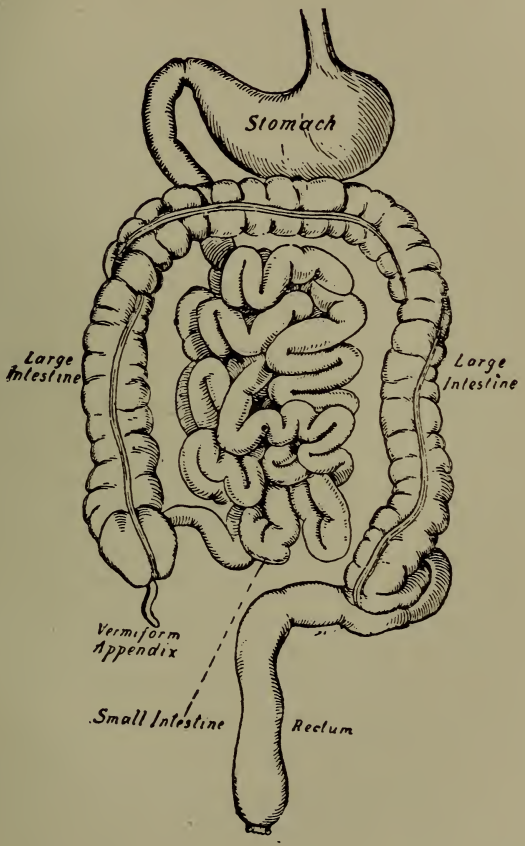
Diarrhœa is an affection characterized by an increased frequency of the discharges from the bowels, of variable quantity and consistence, associated with derangement of the digestive function. It prevails largely among children at all seasons, but principally in the summer months. It often occurs as a symptom of other diseases and is one of the consequences of general blood poisoning. It is due largely to irritation of the intestinal tract from overloading the stomach, eating unripe, indigestible or irritating food, the presence of worms, imperfect digestion, biliary disturbances, want of tone in the bowels, teething, etc.; and

in young children it is often caused by improper articles of food when the child first commences to eat, impure milk, etc.

Symptoms.—The symptoms of diarrhœa vary considerably. There are frequent evacuations of the bowels of a more fluid character than is natural. The discharges are generally preceded by a rumbling noise, uneasiness in the lower part of the abdomen, with a sense of weight or pressing down, which is relieved as soon as the evacuation is completed, but returns before the succeeding one occurs. In some cases the griping is severe, while in others it may be wholly absent. The tongue is usually coated, there is a bad taste in the mouth and often nausea and vomiting. If the disease continues long, the strength is reduced, emaciation occurs, all the various functions are disturbed and the skin becomes dry and sallow. The appearance of the stools varies greatly.

In diarrhœa arising from *irritation* of the bowels, due to acrid, indigestible food, green vegetables, overfeeding, the presence of worms or from cold, etc., there are frequent copious, offensive discharges, preceded by griping, flatulence, nausea with coated tongue, loss of appetite, headache and, if it continues any length of time, prostration. When *indigestible food* is the cause, particles of the food may be seen in the evacuation. If due to *worms*, these parasites whole or in pieces may be seen, but the reader is referred to that subject for a more complete description. When from *teething*, there will in addition to the other symptoms be irritation of the nervous system, swelling of the gums and the symptoms generally accompanying teething.

Figure 37



The Stomach and Intestines

When the disease is due to *lack of tone* in the intestines, the relaxed vessels pour the watery portion of the blood into the intestinal canal where it is mixed with the other matters, thus causing copious watery stools in addition to the other symptoms. The prostration in this form is rapid. When diarrhœa is caused by an *excessive secretion of bile*, the passages will at first be mixed with greenish yellow matter, semi-solid and offensive, which as the disease advances becomes more watery. The mixture of the vitiated bile with the acids of the stomach when present in much quantity in the intestines occasions severe griping and offensive green discharges mixed with mucus. The griping does not wholly cease after the evacuation, and there is tenderness in the right side and pit of the stomach. The mouth tastes bitter, the tongue has a dirty yellowish white coat, the appetite is lost, the skin is dry and the urine scanty and highly colored. The presence of bile in the stools can generally be recognized by its appearance and smell. These symptoms may be so combined and varied that a given case will not admit of classification under any of the recognized forms of the disease, and the discharges may amount to merely a looseness and may consist of mucus or be watery and present every shade of color and odor.

Treatment.—When the diarrhœa is due to the presence of irritating materials in the intestinal canal, as unripe fruit, indigestible food, etc., or the excessive secretion of bile, it is a good plan to preface all treatment with a mild purgative, which aids the efforts of nature by the expulsion of the offending matter and often puts an end to the whole trouble. For this

purpose a good dose of castor oil should be given or, if preferred, the following prescription that very nearly resembles the old fashioned neutralizing mixture. Take:

Fluid Extract of Rhubarb, .	2 drams
Bicarbonate of Soda, . .	2 drams
Essence of Peppermint, . .	½ dram
Brandy, ...	4 drams
Simple Syrup, ...	4 drams
Water, sufficient to make	4 ounces

The dose of this for children from two to five years old is a teaspoonful or a little less repeated every two hours, until it appears in the stools, or a bright yellow color is seen in them, when it is to be stopped.

If either of the foregoing does not put a stop to the diarrhœa, make use of the following mixture:

Tincture of Camphor, . .	1 dram
Tincture of Catechu, . .	1 dram
Tincture of Capsicum, . .	½ dram
Essence of Peppermint, . .	½ dram
Elixir of Lactopeptin, to make .	2 ounces

Dose—Ten to thirty drops, according to the age of the child, repeated every two to four hours, or oftener in violent cases. It should be given in warm sweetened water.

Apply hot fomentations or a hot water bag to the abdomen.

With these two prescriptions the majority of diarrhœas may be controlled, varying the doses to suit the age of the patient and violence of the attacks.

Diarrhœa in which the tongue is heavily coated, but which is not due to overeating, etc., but in which there is griping, flatulence, rumbling noise in the bowels,

with offensive semi-fluid stools, is generally controlled very readily by:

Fluid Extract of Mandrake, .	5 drops
Fluid Extract of Veratrum, .	3 drops
Water, ...	4 ounces

Dose—A teaspoonful every hour or two.

Painless watery diarrhœa will usually yield to five drops of the compound tincture of cinchona in a teaspoonful of water, repeated every hour or two. It is also beneficial in those cases in which there is a want of tone in the intestines.

Great care should be excercised in administering opiates and astringents to children in intestinal disorders for, though potent for good when properly employed, they are equally productive of harm when mismanaged.

During the disease, attention must be paid to the diet, and only light and easily digested food should be allowed. Toast, rice, boiled milk are among the best articles. The patient should at the same time be kept in bed.

DYSENTERY

This disease, also known as *flux*, *bloody flux*, *colitis*, etc., is an acute inflammatory affection of the lower bowel, attended with looseness. It is usually confined to the lower portion of the large intestine and is attended with severe straining, bearing down, fever and bloody stools—symptoms that distinguish it from diarrhœa.

Dysentery frequently occurs as an epidemic and is then more severe and fatal than when it occurs in isolated cases. It is met with oftenest during the autumnal months. When dysentery occurs as an epidemic,

it is supposed to be due to some poisonous germs floating in the atmosphere. It is also caused by malaria and, when occurring in the fall, may be due to cold and moisture following intense heat, cold, improper diet, etc.; a cause of considerable importance is the chilling of the surface of the body during the autumn, when cool nights follow hot days. A person retires with a covering sufficiently comfortable at the time, but wakes in the night with a sense of chilliness. This causes the blood to recede from the surface and, being driven upon the intestines by repetition, predisposes to the development of dysentery on the operation of some additional cause, however slight.

Symptoms.—It will frequently be observed that constipation has preceded the attack, but for a couple of days before the disease develops there is loss of appetite, languor, uneasiness or tenderness in the lower part of the abdomen, chilliness, nausea, etc.; soon there is an increased frequency of the evacuations, with griping, etc.; as inflammation develops in the lower bowel there is burning and pain in the rectum, the discharges become more frequent and less abundant; there is a constant desire to go to stool, and great efforts are made to expel something, which only results in the ejection of small quantities of mucus which are apt to be streaked with blood. As the discharges pass through the inflamed parts they occasion intense pain.

These symptoms continue to increase and the quantity of blood becomes greater. The evacuations vary in appearance, sometimes frothy, containing portions of fecal matter, mucus and blood. Again they appear like the washings of meat; sometimes they are wholly mucus or perhaps pure blood. More or less fever

attends these symptoms, with dry, coated tongue, thirst, great prostration and in malarious sections there will be evidence of congestion of the liver and obstructed circulation.

Dysentery has no regular duration and may yield in a few days or it may be protracted into weeks. As the disease progresses, ulceration of the parts affected is liable to occur when pus will appear in the discharges. The appearance of brown, chocolate-colored discharges, great prostration, typhoid symptoms, etc., indicate great danger; but the reappearance of the fecal matter, except when it is passed in hard lumps, is generally a favorable omen, as a decline in the inflammation is likely to follow, even though the suffering and all the other symptoms may continue for two or three days longer before much improvement is noticed.

TREATMENT.—To empty the bowels by the use of the rhubarb mixture advised for diarrhœa before the development of severe inflammatory symptoms is a judicious measure. Then put the patient upon:

Tincture of Aconite Root, . .	10 drops
Tincture of Gelseminum. . .	5 drops
Water, ...	4 ounces

Dose—A teaspoonful repeated every two hours, unless the characteristics of gelsemium appear, as double or indistinct vision, drooping lids, etc., when the dose must be lessened or given at longer intervals. This will not be likely to occur from this dose, except in very young children. For adults the dose must be materially increased. Alternate the foregoing with:

Corrosive Sublimate, . .	½ grain
Fluid Extract of Ipecac, . .	1 dram
Water, ...	8 ounces

Dose—A teaspoonful every two to four hours, according to the severity of the symptoms.

These remedies have proved themselves so near specifics in my hands that I place great reliance upon them.

If the pain and tenesmus are severe, a few doses of paregoric or laudanum may be prescribed by the physician until some degree of comfort is obtained.

Washing out the bowel slowly and gently with mild antiseptic solutions will often prove beneficial.

Diet is of the greatest importance in this disease, and no solid food is to be permitted. During the acute attack give pasteurized or peptonized milk, or lime water and milk in about the proportion of one part of the former to eight of the latter. As patient improves, give arrowroot, custard and other easily digested foods. To allay the thirst permit small pieces of ice to slowly dissolve in the mouth; this is far better than copious draughts of any liquid.

The whole body should be frequently sponged with warm water made alkaline with a little soda. Warm fomentations of hops or hot water bag over the abdomen will often afford material relief. They must be light and never be wet enough to drip. The sick chamber should be kept well ventilated and disinfected with carbolic acid, daily, and the discharges from the bowels must be removed at once and thoroughly disinfected.

ACUTE INTESTINAL CATARRH

This disease, also called *muco enteritis*, is an inflammation of the mucous membrane of the small intestine. It may result from cold or the irritation of particles of undigested food, or from other causes of intestinal troubles. It may extend upward and involve the stomach or downward to the large intestine.

Symptoms.—Muco-enteritis generally begins with pain and tenderness about the navel, griping and a frequent desire to evacuate the bowels. There is diarrhœa, but whether the evacuations be large or small they do not relieve the desire to go to stool. The evacuations vary, sometimes yellowish, thin, acrid and mixed with mucus and sometimes tinged with blood. If the stomach is involved there will be vomiting. If it extends to the large intestine there will be the straining characteristic of dysentery. There is languor and chilliness or perhaps a severe chill, fever and pain about the navel, the appetite is lost, the tongue coated with a yellowish fur and, in the severer cases, it is dry with redness of the tip and edges. In some cases the prostration is great and typhoid symptoms develop, pressure on the bowels reveals tenderness and pain, the stools are variable, the desire irresistible, yet perhaps very little or nothing passes.

Treatment.—The use of the popular "diarrhœa medicines" in these cases is often worse than nothing, frequently aggravating the disease. The function of the skin should be re-established as soon as possible, and for this purpose a vapor bath or even a warm bath should be employed at the commencement. The patient should then be put into a warm bed and moderate perspiration promoted, care being taken when getting up to evacuate the bowels to be well wrapped to prevent taking cold. I then give:

Tincture of Aconite Root, . .	10 drops
Fluid Extract of Ipecac, . .	10 drops
Water, ...	4 ounces

Dose—A teaspoonful every hour or two. Alternate this with:

Fluid Extract of Mandrake, .	10 drops
Water, ...	4 ounces

Dose—A teaspoonful every two to four hours between the other doses, and continue it until the discharge becomes more natural in appearance and consistence.

If there is much blood in the stools with mucus and severe straining, in place of the mandrake I would give:

Corrosive Sublimate, . .	¼ grain
Water, ...	8 ounces

Dose—A teaspoonful every four hours.

Counter-irritation over the bowels with mustard or with turpentine applied a few moments at a time on a cloth answers a good purpose in many cases.

The thirst, which is sometimes extreme, may be allayed by allowing small pieces of ice to melt in the mouth and will not aggravate the diarrhœa as large quantities of fluids are apt to do. The diet must be light and no solid food allowed. Pasteurized or peptonized milk or milk and lime water should be given in small quantities at regular intervals. The warm sponge bath should be repeated two or three times a day, As a rule, opiates do not act kindly in these cases.

Usually this treatment will produce a very favorable impression in two or three days, but care must be observed, for the disease is extremely liable to relapse, even after the discharges have had a natural appearance for several days. When a relapse occurs, it necessitates a repetition of the treatment, in which case it is to be supplemented with a few doses of quinine, proportioned to age, given after the active symptoms have declined. This is more particularly demanded when malarial influences exist. A looseness of the bowels

sometimes remains that will demand the administration of astringents. For this purpose two to five-drop doses of fluid extract of cranesbill is one of our best remedies and may be repeated two to four times a day. A pure article of Hungarian wine answers an excellent purpose, combining as it does an excellent astringent with a mild stimulant; it must, however, be used cautiously or it will induce constipation that may be followed by a relapse. An infusion of red raspberry leaves answers well. Blackberry cordial or an infusion of the blackberry root are agreeable astringents and some of them are always within reach.

CHOLERA MORBUS

This is an acute disease, characterized by vomiting and purging, associated with derangement of the functions of the liver. It may occur at any period of the year, but is most frequently met with in the latter part of summer and autumn and prevails more extensively some years than others. The influence of extreme heat upon the functions of the liver is a powerful predisposing cause. Sudden changes in the weather, eating improper food, unripe vegetables and fruits, of which cucumbers, green apples and plums are most deserving of mention, drinking freely of icewater when overheated, ice cream, impure milk, etc., etc., are the most frequent exciting causes.

Symptoms.—In a large per cent of cases it will be ascertained on careful inquiry that there has been present for a few hours or days some derangement of the stomach, nausea, coated tongue, flatulence, with a sense of weight and oppression, as if some of the food eaten remained in the stomach undergoing fermentation instead of being digested, sometimes accompanied

by diarrhœa. These premonitory symptoms are not always present or are so mild as to attract little or no attention.

The real attack generally comes on suddenly and violently; sometimes a severe chill awakens the patient from a sound sleep, soon to be followed by a pain in the bowels, nausea, vomiting and purging. At first the matter vomited will consist of partly digested food mixed with mucus and a dirty yellowish or greenish fluid, and the discharge from the bowels will consist of ordinary feces mixed with a similar matter as that ejected from the stomach. The discharges become more fluid as the disease goes on, containing for a time more or less vitiated bile. In severe cases the discharges soon take on the characteristic "rice water" appearance of Asiatic cholera. The discharges are profuse, frequent and sudden and rapidly exhaust the patient, so that he becomes so weak as to scarcely be able to move in bed. The weight of the body is rapidly reduced. There is a terrible thirst present, but drinks are rejected almost as soon as swallowed. Spasmodic contractions of the muscles of the lower extremities frequently occur and sometimes the abdominal muscles are involved. These cramps are exceedingly painful. The pulse is small and frequent, the surface cold and bathed with a cold perspiration, the face appears blue and pinched. If relief is not obtained the prostration is increased, the mind wanders, insensibility and collapse occur to end in death. The disease lasts from a few hours to two or three days, but sometimes it is followed by a secondary fever lasting a week or more. Usually the disease is easily recognized and in the majority of cases, particularly with proper management, recovery takes place.

TREATMENT.—The irritable condition of the stomach demands attention. The time was when emetics were regarded as about the only thing capable of accomplishing this object, but alas! how mankind changes. Emetics are no longer the *fashion* and we seek to accomplish the same end by entirely different means, and we suggest:

Fluid Extract of Ipecac, . .	5 drops
Fluid Extract of Veratrum, .	5 drops
Water, ...	4 ounces

Dose—A teaspoonful every ten minutes.

Apply over the stomach a mustard paste or plaster and keep it on until the skin is considerably reddened. Apply dry warmth to the extremities; brisk rubbing, with or without dry mustard, will aid in stimulating the circulation and relieving the cramps. Endeavor to restore warmth to the surface. Do not permit large draughts of any fluid, but allay the thirst by allowing small bits of ice to melt in the mouth. Give internally:

Tincture of Camphor, . .	1 dram
Essence of Peppermint, . .	½ dram
Essence of Jamaica Ginger, .	1 dram
Chloroform, ...	1 dram
Brandy, to make . . .	2 ounces

Dose—Five to fifteen drops according to the age of the child, with larger doses for adults, given in hot water sweetened and repeated every fifteen to thirty minutes, oftener if rejected. At the same time continue the ipecac and veratrum.

This prescription alone is a powerful stimulant to the nervous system, aids in controlling the vomiting and diarrhœa, relieves the cramps in the extremities and fulfills most of the indications that call for medicine in the disease.

When the stomach has been brought under control, we may use the following for the liver:

Tincture of Leptandra, . .	1 dram
Aromatic Syrup Rhubarb, .	1 ounce

Dose—A teaspoonful every two or three hours until bile is seen in the stools and they begin to appear natural again. This dose is for a child from five to ten years old.

Friction and dry warmth to the extremities must not be overlooked, for this and cholera are the diseases above all others in which "heat is life."

Sometimes the vomiting is very obstinate. If it does not yield to the measures already advised in a short time, other means should be employed. Iced champagne will sometimes succeed. An infusion of peach leaves is efficient in some cases or, if it can be procured, the compound tincture of cajeput in fifteen to twenty-drop doses every quarter or half hour is one of the best remedies. It is best taken on a little sugar. If collapse threatens, artificial warmth and stimulants and two drops each of the tincture of camphor and cayenne in water every ten or fifteen minutes. Inhalation of ammonia is also beneficial. If necessary, persevere with these means and many apparently hopeless cases will be restored to health.

After the acute symptoms are over there will remain a debility and prostration which may be met with the following:

Tincture of Cinchona Compound,	½ ounce
Tincture of Nux Vomica, . .	20 drops
Simple Elixir, to make . .	4 ounces

Dose—One half to one teaspoonful three times a day, larger doses for grown persons.

Convalescence is usually rapid.

SUMMER DIARRHŒA—CHOLERA INFANTUM

This disease, popularly termed the "summer complaint of children," is one of the greatest foes of infancy and is one of the most difficult diseases we are called upon to treat. It prevails more extensively in cities and towns than in the country and is usually met with in the first and second years of a child's existence. In large cities almost one half the deaths in infants under one year old are caused by summer diarrhœa. It is most frequent in bottle-fed babies. There are several varieties of the disease, a fact that has occasioned much diversity of opinion; and as any attempt to distinguish the different types of the disease could only result in confusing the readers, I will omit it.

There is a serious perversion of the nutritive functions with vomiting and diarrhœa, sometimes acute, at others chronic, sometimes accompanied by fever and sometimes without.

CAUSES.—Impure food, the heat of summer, bad water, bad air, unhygienic surroundings, irritation of the nervous system from teething, etc., all contribute to the production of the disease. Frequently several of these causes are combined. The country districts present decided advantages for children; there the heat is not usually so intense or continuous; the ventilation is better; the water pure and not poisoned by the conductors it traverses; the milk is better, unmixed and unadulterated and not subjected to the natural changes that occur in it on account of time after leaving the cow and the agitation of transportation; vegetable food is obtained before it undergoes retrograde metamorphosis. The opportunities for out-door exercises are greater, etc. The disease frequently occurs about

the time of weaning or when young children are subjected to a change of food which, combined with other causes, are sufficient to develop it. Even when fed upon its mother's or the nurse's milk, unhygienic surroundings, dietetic or sexual imprudence may cause such a change in the milk as to be exceedingly deleterious to the child and thus, aided by other causes, induce an attack of this disease. The mother's or nurse's milk even while plentiful, may be so impure or impoverished as to be a source of the disease.

Nursing bottles, unless cleansed at regular intervals with the greatest care, develop disease germs with great rapidity and are a great abomination. The more complicated they are the more difficult they will be to cleanse and consequently the worse for the child. Inpure air, often the result of decaying matters pregnant with disease germs, is not backward in its contributions to the development of the scourge.

Symptoms.—Necessarily, the symptoms of this disease vary. Vomiting and diarrhœa, however, being present in all cases, but in variable severity. These, with the intense thirst, the great prostration and rapid emaciation furnish us with means of diagnosis, however much the other symptoms may vary. There may be an increased irritability of the child with diarrhœa for several days, but attracting little attention. This may increase slowly, the nausea, vomiting and thirst gradually developing. In other cases the attack comes on suddenly and is severe at the outset.

The passage from the bowels at first contains fecal matter, little odor or perhaps a sour smell, but, as a rule, they are very offensive, the odor sometimes penetrating every part of the house. The stools frequently

contain partially digested food mixed with stringy mucus, yellowish, greenish or clayey in color, or are perhaps almost white with curds of undigested milk and sometimes streaked with blood. In other cases the stools are watery, and it is not unusual to see them change rapidly, presenting all these peculiarities in turn. The thirst is intolerable, incessant, and the fluids taken are almost immediately rejected or discharged by the bowels. The child is uneasy, restless, never satisfied, desiring constant change, or it may lie semi-stupefied, roused at intervals by paroxysms of pain that seem to resemble the pains of cholera morbus, the child suddenly screaming and then lapsing into the stupor again.

The nervous system is very irritable and often disease of the brain complicates the case.

As the disease progresses, the eyes become sunken and partially closed, the lips are dry, parched, bleeding, the countenance pale, the skin dry and pinched and rapid emaciation takes place. The bowels are tender. An eruption often appears upon the buttocks or, excoriated by the discharges, contact with the stools or urine occasions great smarting, and pain is materially added to the child's suffering.

The pulse is small, quick, tense; the tongue at first coated with a whitish fur, becomes dry and glossy. All the symptoms are generally worse at night and a remission towards morning apt to occur, but rapid changes are likely to take place at any time.

When the brain is affected, the head becomes hot and is rolled from side to side, or the child sinks into a stupor, the eyes rolled upwards, the lids but

partially closed, the pupils dilate and do not contract on exposure to the light.

There may be as many as fifty stools in twenty-four hours, but, as a consequence when so frequent, the quantity at each passage will necessarily be small.

Sometimes the disease assumes a more chronic form and the symptoms are not so severe, and some of them may be absent, but the vomiting and diarrhœa reduce the child to a skeleton, the skin becomes dark and harsh, with livid spots, the mouth filled with apthous ulcerations, the tongue swollen or perhaps shrunken and the stools acrid and offensive. In such cases, acute symptoms or disease of the brain are sometimes developed and destroy the child. The disease may last from three days to two weeks, leaving the child in a broken-down condition from which it will require months to recover. In others the alternate periods of getting better and worse will protract the case for weeks and even months. Absolute safety from a relapse is never certain until the warm season is passed and the cool weather is accompanied with a complete convalescence; and even then there is no immunity against a recurrence the next season, except the child be over two years old, when there is comparative safety.

Treatment.—Reference to medical writings will convince the reader that the profession is at sea in this complaint, and it is no wonder with this experience many prefer to rely on the nursing and care of "grandmă" or "aunty" instead of resorting to "doctor's stuff."

Pure air is essential and a removal to the country, particularly an elevated situation, is desirable. This cannot always be done and in cities every effort should

be made to render the air as pure as possible by the removal of everything offensive; avoid dark, damp rooms and secure plenty of sunshine, even though the heat has to be modified by shades, but with the sunshine secure constantly changing air. Allay the inordinate thirst by a spoonful of cold water; it is very grateful and, though too much will be rejected, small quantities repeated often are generally acceptable. Small bits of ice dissolved in the mouth are beneficial. The ice *must* be clear and pure; repeat the bits often; break them so fine that if swallowed they will not do any harm.

No time should be lost in calling a physician to treat an infant or child suffering from an attack of diarrhœa. If for any reason his visit is delayed all breast nursing or bottle feeding should be stopped for from twelve to twenty-four hours and some egg or barley water given instead. A dose of castor oil and a warm rectal injection of soapsuds will help nature to get rid of the irritating and poisonous substances in the bowel. The following powder given every three hours will often check the diarrhœa:

Salol, ...	½ grain
Subcarbonate of Bismuth, . .	2 grains

Lime water may be added to milk advantageously in the proportion of an ounce to a pint. See that the nursing bottle is thoroughly cleansed and scalded after each feeding. Diminish the quantity of food from that taken before the sickness began and give it only at intervals of two to four hours. Sometimes the milk will be rejected by the stomach because it is too rich in fatty matter; in such cases skim it, but do not go

to the other extreme and starve the child on the shadow of milk.

In older children the juice of raw meat is sometimes very acceptable and better than milk; add a little salt to it to make it palatable and give half to one teaspoonful every two hours. Carefully watch all food and if it disagrees *set it aside.* I have seen weak mutton broth agree nicely sometimes when other food was rejected. I have seen skimmed milk accepted and agree well when unskimmed was loathed and rejected. This is not apt to happen in cities. There are many artificial foods in the market, but of their relative value I am not prepared to speak. When tried, it should be cautiously and under advisement of a physician. The digestive process being almost wholly if not quite suspended, there is usually more danger of overfeeding than starving the child. Small quantities digested do good, but large amounts are apt to undergo fermentation and add to the existing trouble.

Bathing is not to be omitted. If the child is feverish, restless, thirsty, tepid bathing is decidedly beneficial and should be repeated several times in twenty-four hours. A sponge bath is most proper and care should be observed that the clothing is not left wet.

The removal of the discharges from the bowels should be effected immediately and disposed of so that no smell is left behind. As the buttocks are very apt to get sore, they should be dusted with powdered stearate of zinc or smeared with oxide of zinc ointment. Powdered starch or lycopodium is also good, and may be freely dusted on.

The neutralizing cordial of the eclectic school is in great favor with many. I esteem it highly if the tongue

is moist with a whitish fur, the matter vomited sour or the stools clay colored, sour or curdy. For these cases I prepare it thus and consider it better than the usual preparation on account of the omission of the sugar, which is always in the preparation as usually obtained:

Pulverized Peppermint Leaves,	½ dram
Pulverized Rhubarb Root,	1 dram
Bicarbonate of Soda,	1 dram
Boiling Water,	4 ounces

Cover, let it stand until cool, strain and add half an ounce best brandy and give in teaspoonful doses every hour until its peculiar color is seen in the stools; then give it three times a day. The addition of one half grain of subnitrate of bismuth in each dose often materially enhances its value.

When we have the vomiting under control, we have gained an important point. If the stools are copious, watery, offensive and apparently painless I would give two to five drops of the compound tincture of cinchona every three hours in a teaspoonful of water. When the discharges begin to yield, lengthen the intervals between the doses.

If the trouble depends on irritation from teething, and the gums are hot and swollen, lance them and give in alternation with the neutralizing cordial above:

Tincture of Aconite,	10 drops
Water (one half goblet),	4 ounces

Dose—A teaspoonful every hour or two until the irritation of the nervous system is relieved.

The use of pepsin in grain doses just before or after the feeding will aid the digestion of the food taken at that time and is a valuable auxiliary to other means.

After the urgent symptoms are passed, a looseness of the bowels or a feebleness of the digestion often

remains. In such cases continue the pepsin at the time of feeding and also give three to five drops of compound tincture of cinchona in a spoonful of water about four times a day. This, however, may be replaced by hydrastis in some form or other, of which the fluid without alcohol, five drops in two ounces of water given in teaspoonful doses three or four times a day, answers a good purpose.

I might add fifty or more other remedies, but as they would be more apt to mislead than aid I omit them. Many cases will occur which in the judgment of the attending physician require that other remedies should be given.

WORMS

Several varieties of worms infest the intestinal canal, but children are specially liable to the round or stomach worm (Ascaris Lumbricoides) and the small white or pin worm (Oxyuris Vermicularis). The round worm (Fig. 39) is smooth, light brown or reddish in color, about as thick as a slate pencil, tapering at each end and from five to ten inches long. Pin worms are very common in children between three and ten, and while usually there are from two to ten present there may be hundreds. Round worms infest the small bowel. The pin worm (Fig 38) is about one third of an inch long and looks like a little piece of white thread. It inhabits the rectum and lower bowel.

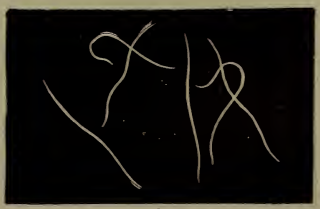


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Figure 38

Figure 39

The symptoms they occasion are variable; usually there is a malnutrition and a catarrhal condition of the bowels, plenty of mucus being favorable to their development. The appetite is capricious, sometimes absent and sometimes voracious, the breath offensive, acrid eructations, colicky pains about the navel, sometimes vomiting and diarrhœa, slimy stools, profuse urine, grinding the teeth, sudden starting in the sleep, picking the nose, fever, emaciation, hacking cough, irregular pulse and sometimes convulsions.

In addition to these symptoms, when pin worms infest the lower bowel there will be an intolerable itching of the anus with slimy stools, etc. All these symptoms may be present and yet we cannot be absolutely certain that they are due to worms, unless we see them or pieces of them in the stools. Occasionally, however, they will be vomited up or crawl from the mouth. In little girls pin worms will sometimes find their way from the rectum into the vagina and give rise to troublesome itching and leucorrhœa and sometimes irritation of the bladder.

TREATMENT.—The indications are to destroy the parasites and improve the condition of the intestinal tract so as to prevent their reproduction. Worms are exceedingly prolific, and children of a scrofulous disposition and those indulged in an excess of sweets or fed on unwholesome food will be very apt to suffer from frequent repetition of the symptom unless the treatment to destroy them is repeated at intervals and an improvement in the intestinal condition effected. For the first indication we have several remedies, even the common pumpkin seed is a good one. It may be eaten by the children or steeped and the tea drank. The old fashioned infusion of pink root and senna is an effectual remedy in doses of one half to one teaspoonful for a child of two years. Turpentine fulfills the indication well, fifteen to twenty drops of spirits of turpentine in a dose of castor oil repeated every third day does well. Salt water gives temporary relief. I like the following: Take

Santonine, ...	10 grains
Podophyllin, ...	2 grains
Bicarbonate of Soda, . .	30 grains
Sugar, ...	1 dram

Another good method is this: Give the child (six years old) a glass of milk only for supper and at bedtime a powder containing one half grain each of calomel and santonin for three nights.

I have seen this plan do wonders for children sometimes. When convulsions occur, in addition to the use of the "worm medicine," give such treatment as is advised under the head of convulsions.

The pin worms infest the lower bowel and remedies administered by the mouth are of little consequence.

To effectually destroy them it is necessary to apply the remedies directly. Injections are required and a strong solution of salt and water is very effectual. An infusion of ground quassia chips (one ounce of quassia in one pint of hot water) is good, or fifteen drops of carbolic acid in a goblet of warm water may be used.

Whichever injection is selected should be used after the turpentine and oil or santonin and podophyllin have acted on the bowels and it should be repeated every two or three days until they are entirely destroyed. In using injections, let the quantity be sufficient to distend the folds of mucous membrane of the rectum and reach all the hiding places of the parasites, or they will speedily be reproduced. At least half a pint should be used at a time, but not sufficient to distend the bowels so much as to cause the child severe pain. The injection is to be retained a few minutes if possible.

This plan of treatment, simple as it may seem to some, will be found efficacious and has the advantage of being available under nearly all circumstances.

The itching caused by pin worms may usually be overcome by applying cold cloths or mercurial ointment to the anus. Cleanliness of the parts is all important.

Although we have already exceeded the intended scope of the present edition, the author realizes that there are many other subjects deserving consideration that must be left to the future. Still, if the directions already given shall enable woman to find even partial relief from sickness and pain and render her assistance in the preservation of her darlings and the promotion of their welfare, his object will have been accomplished.

CHAPTER XIX

CARE OF THE SICK

FOODS AND MEDICAL FORMULÆ

Sponge Bath

Plain water or equal parts of water and alcohol, or water and vinegar may be used. The temperature of the water should be 85° F. to 90° F. Remove all clothing (in infants except the diaper) and sponge one part of the body at a time, the rest of the body being kept covered. The sponging should last for five to fifteen minutes, and the child then wrapped in a blanket without any clothing.

Mustard Bath

Stir four or five tablespoonfuls of mustard in one gallon of tepid water and then add four or five gallons of water the temperature of which is 100° F., as ascertained by the bath thermometer. By adding more hot water the temperature can, if desired, be raised to 105° F. or 110° F. This bath is very useful in heart failure, shock, collapse, congestion of lungs or brain. The mustard bath should not usually last longer than ten minutes, when the child is quickly removed and wrapped in a blanket, without drying.

Mustard Foot Bath for a Child

Protect the bed with rubber sheet covered with towels. Cloths are wrung out of mustard water, made by adding one teaspoonful of mustard to a quart of water heated to 110° F. Wrap these cloths about the child's feet (keeping the rest of the body covered) and apply until the skin becomes red.

Mustard Plaster or Paste

For adults this is made of pure mustard, or of equal parts of mustard and flour freed from lumps, mixed into a paste with tepid water and spread between two layers of muslin or soft linen. The object of the flour is to prevent blistering, and in its place corn meal, vaseline or the white of egg may be used. For children the proportion should be one part mustard to from four to eight parts flour. The mustard plaster is applied to the part, covered with a towel and allowed to remain in place until the skin is well reddened—usually ten to twenty minutes. A corner of the plaster should be raised from time to time to see that it is not blistering. After the plaster has been removed the skin should be well cleansed, smeared with vaseline, oil or lard and covered with a soft cloth.

Hot Water Fomentations

Place a piece of flannel or blanket (preferably white) of the size required in the middle of a large towel and dip it in a basin of boiling water until thoroughly soaked. Twist the ends of the towel to thoroughly wring out the water, unfold the towel, shake out the flannel, apply it to the affected part, cover it with dry flannel or towels and rubber sheeting and apply a bandage to retain it in place.

Spice Plaster

Thoroughly mix equal parts of allspice, cloves, cinnamon and nutmeg and add one half part of black pepper. Place in a muslin bag, quilted to prevent sagging. Moisten one side of the poultice with warm brandy or whisky and apply to part desired. When the skin is tender, the amount of cloves and black pepper should be decreased. A spice plaster may be allowed to remain in position for hours, and is by many considered a very useful application in some forms of stomach and bowel troubles in children.

Turpentine Stupe

Sprinkle about thirty drops (for children ten or fifteen) of turpentine over a piece of flannel wrung out of boiling water. A better way is to soak the piece of flannel in a pint of boiling water to which two or three teaspoonfuls of turpentine have been added. Take out the flannel, wring thoroughly and apply.

Another method is the following: Place a tin cup containing the turpentine in a vessel or dish of hot water so that the turpentine may be warmed without coming near the fire. Dip a piece of flannel into very hot water, wring it so dry that no water drips from it, dip it into the hot turpentine and wring it again to free it from any excess of turpentine. The flannel while hot is then applied, but should not be left on too long, as it might blister.

Flaxseed or Linseed Poultice

Two and a half cups of meal and three cups of water will be required for a poultice for the chest or back. Add the meal to the boiling water, stirring all the time with a knife or spoon. When the mixture is just thick

enough to drop from the spoon, remove from the fire, beat it well and spread it evenly, about a quarter of an inch thick, on muslin or soft linen, leaving a two-inch margin to turn back. Before applying the poultice hold it to the face to see that it is not too hot. Put it on slowly—a patient can stand a hotter poultice when it is let down a little at a time. The poultice should not be left on longer than one hour. After removing it dry the skin, and if no more are to be used apply a little oil, vaseline or lard to the skin, if irritated, and cover with flannel.

Beef Essence

Mince finely one pound of lean, juicy beef, put it into a fruit jar and cork tightly. Set the jar in a kettle of cold water over a slow fire and let it boil for three hours. Strain and season with salt and red pepper.

Scraped Raw Meat

Scrape the pulp from a good steak, season with salt and pepper to taste and serve as a sandwich between two thin lightly toasted slices of bread.

Beef Broth

Cut up one pound of beef, put it into one pint of water and allow to stand for four or five hours. Then cook over a slow fire for one hour and skim off the fat.

Beef Tea

(1). Chop fine or mince one pound of lean beef, put it with its juice into an earthen vessel containing one pint of tepid water and let it stand for one hour. Strain thoroughly and squeeze all the juice from the meat. Place on a fire and slowly raise just to the boiling point, stirring briskly all the time. Season

with salt and pepper, and when giving the tea always stir up the sediment.

(2). Chop up fine one pound of lean beef and put it into one pint of cold water, to digest, two hours. Simmer on stove for two hours, but do not boil. Make up for water lost in the evaporation by adding cold water so that one pint of beef tea represents one pound of beef. Squeeze the beef thoroughly, strain and flavor to taste.

Flaxseed Tea

Add three teaspoonfuls of flaxseed, not ground, and one half teaspoonful of extract of licorice to ten ounces of boiling water and allow the mixture to stand in a warm place for from one to four hours. Lemon juice and sugar may be added to improve the taste.

Albumen or Egg Water

Add the white of one fresh egg to one half pint of cold water previously boiled. Shake thoroughly for half a minute and it is ready to serve. Sugar, salt, cinnamon or brandy according to taste may be added if desired.

Barley Water

Put two good sized teaspoonfuls of well washed pearl barley into one pint of cold water in a saucepan and boil slowly down to two thirds. Strain.

Rice Water

Cover two tablespoonfuls of rice with boiling water. Boil five minutes, drain and throw water away. Cover with two quarts of boiling water and simmer gently until reduced to about one quart. Strain through gauze. If used alone add a little salt.

Rice Milk

Add one tablespoonful of well washed rice to one pint of fresh milk and boil for an hour and a half. Rub it through a sieve, add two tablespoonfuls of granulated sugar, heat and serve.

Oatmeal Water

Put one tablespoonful of oatmeal flour in one pint of water and boil down to two thirds of a pint. Strain. Beaten white of egg may be added if desired.

Oatmeal Gruel

Mix two tablespoonfuls of oatmeal in a little cold water and add a quarter of a teaspoonful of salt. Pour over it one pint of boiling water and stir over the fire until it boils. Place it to one side where it will bubble slowly for half an hour; add a lump of sugar and a tablespoonful of whipped cream and serve.

Arrowroot Juice

Moisten a tablespoonful and a half of arrowroot in a little cold water. Pour over it a pint of boiling milk. Stir over the fire until it thickens and let it boil slowly for ten minutes. Remove it from the fire and add a teaspoonful of sugar and a quarter of a teaspoonful of salt.

Junket

Put a half pint of cold, fresh milk into a clean saucepan and heat it lukewarm (not over 100° F.); add one teaspoonful of essence of pepsin or liquid rennet and stir just enough to mix. Divide quickly into small cups or glasses and let stand until firmly jellied, when the junket is ready for use, just as it is, or with sugar, grated nutmeg, etc.; or it may be placed on ice and taken cold.

Whey

Put one pint of cold, fresh milk into a clean saucepan and heat it lukewarm (not over 100° F.); add two teaspoonfuls of essence of pepsin and stir just enough to mix; let it stand until firmly jellied, then beat with fork until it is finely divided; now strain, and the whey (liquid part) is ready for use. Keep in a bottle or glass jar near ice.

How to Fumigate a Sick Room After Contagious Disease

Books, playthings, toys and articles of trifling value should be burned. Close all cracks and openings in the room by stuffing them with cotton or pasting paper over them. On a clothesline in the room hang all bedclothing, rugs and draperies, and open all closets and drawers. Pillows and mattresses should be ripped open so that the sulphur fumes may have access to every part. In the center of the room place a washtub partly filled with water and in it put two or three bricks on which to put a small dish containing the broken roll sulphur saturated with alcohol. Now light the sulphur, close the door, keyhole and all cracks. At the end of twenty-four hours open the door and all windows, so as to thoroughly air the room for at least another twenty-four hours. All furniture, floors and walls should then be washed with a one-in-one-thousand solution of corrosive sublimate.

Neutralizing Mixture

This valuable preparation, so much in use by the eclectic school, for dysentery, cholera morbus, diarrhœa, vomiting, etc., is variously prepared by different physicians. The following formula will be found

convenient and efficacious. The pulverized peppermint leaves, from the plant gathered fresn each year, will be found preferable to the oil or essence. Take:

Indian or Turkey Rhubarb,	1 ounce
Bicarbonate of Potassa,	1 ounce
Peppermint Leaves, Pulverized,	½ ounce

Mix. Put it in a covered stone or porcelain jar, and add a pint of boiling water. When cold add one half pint of best brandy and one half pound of loaf sugar. Let it stand a day or two and then strain through cloth, and bottle.

Dose—For an adult a tablespoonful every half hour. For a child two to four years old a teaspoonful every two hours.

Some add cinnamon and cloves to the above formula, but I do not know that they increase its efficacy.

The bicarbonate of soda may be substituted for the potassa if necessary.

Mothers will find this an excellent preparation to have at hand for the stomach and intestinal disorders to which every one, large and small, are liable. It will keep indefinitely.

Acute Laryngitis, Hoarseness, Etc.

Compound Tincture of Benzoin, (Friar's Balsam)	2 ounces

Directions—Put two teaspoonfuls in a pitcher containing one pint of boiling water, throw a towel over the head, hold face over pitcher and inhale the fumes.

Dobell's Solution

Borax,	1 dram
Bicarbonate of Soda,	1 dram
Carbolic Acid,	½ dram
Glycerine,	1 ounce
Water,	1 quart

A useful wash for nose and throat in catarrhal affections; should be used with an atomizer.

A Calomel Purge

Calomel, ...	½ to 1 grain
Sugar of Milk, ...	10 grains

Divide into ten powders.

Directions—One powder every half hour or hour until all are taken.

A Useful Mixture for Fever in Children

Citrate of Potash, . . .	½ dram
Sweet Spirit of Nitre, . .	1½ drams
Orange Syrup, to make . .	2 ounces

Dose for Child One Year Old—One teaspoonful in one teaspoonful of water every three hours.

Sore Throat—Tonsilitis

Chlorate of Potash, . . .	2 drams
Bromide of Potash, . . .	2 drams
Tincture of Chloride of Iron, .	2 drams
Extract of Licorice, . . .	1 dram
Water, to make . . .	6 ounces

Dose for an Adult—One teaspoonful in water every two hours; gargle and swallow.

When to Use Dr. Dye's Mitchella Compound

WHEN young girls are just reaching maturity and merging into womanhood, and nature unaided is unable to perform its new functions, **Mitchella Compound**, by giving tone and strength to the distinctly female organs, allows the menstrual periods to recur regularly and without pain.

WHEN menstruation is disordered and is either painful, scanty, profuse, premature, delayed, suppressed or irregular, **Mitchella Compound** will quickly remove the cause, correct the difficulty and allow the functions to be performed naturally, regularly and painlessly.

WHEN, owing to neglect or to insufficient or improper treatment, you are suffering from female weakness in any of its varied forms, **Mitchella Compound** will make you well. Under its wonderful influence the female organs are made healthy, normal and strong, and those annoying symptoms—backache, sideache, bearing-down, prolapse, dragging and wearing pains, irregular or painful menstruation, leucorrhœa (whites)—quickly disappear; the nervous system is toned and strengthened, and the prostration, nervousness and exhaustion vanish as if by magic; the stomach, kidneys and bladder are freed from all traces of disease and, as a result, the symptoms of dyspepsia (such as pain in stomach, wind, bloating, vomiting, etc.), the symptoms of diseased kidneys or bladder (such as painful and irregular urination, getting up at night, swelling of the feet, etc.), rapidly disappear.

WHEN you wish to prevent pain during pregnancy and at the time of confinement, take **Mitchella Compound.** The many annoying symptoms which occur during pregnancy and at confinement are due to abnormal or diseased conditions of the female organs. **Mitchella Compound**, by removing all traces of disease in these parts and restoring all the parts to a normal, healthy state, prevents pain and makes childbirth easy and natural.

WHEN you wish to prevent miscarriage, which is almost always due to disease of the womb or ovaries, the use of **Mitchella Compound** will always be found satisfactory.

WHEN you wish to hasten recovery after confinement, take **Mitchella Compound.** Do not forget that almost all cases of female weakness result from carelessness after confinement. Prevent all future suffering and aid the female organs to return to their normal condition by using two or three packages of **Mitchella Compound.**

WHEN you wish to have healthy, robust and strong children, tone and strengthen the womb by using **Mitchella Compound,** so that the unborn babe may be nourished with healthy, life-giving blood.

WHEN you are passing through the "change of life," **Mitchella Compound** by its tonic influence will prevent or remove all those nervous symptoms which are so prone to occur at this time, and by its tonic and disease-removing effect on the female organs remove tendency to malignant diseases (cancer, etc.), which are so frequent at this stage of life.

WHEN you consider yourself sterile or barren and are anxious to become a mother, let **Mitchella Compound** show its virtue. Sterility is always due to abnormal or diseased female organs. **Mitchella Compound** makes these parts healthy and free from disease, and childbearing then becomes a possibility.

WHEN you are harrassed by kidney or bladder disease, do not forget that the trouble is almost always due to the pressure of diseased female organs. **Mitchella Compound** cures these diseases, and the symptoms of bladder and kidney disease quickly disappear.

A WARNING.—For many years **Dr. Dye's Mitchella Compound** was the only preparation sold which was claimed to allay the pains of pregnancy and confinement. The praise and encomiums which have been showered upon it by many thousands of women who have tested its virtues and merits have caused many imitations to spring up. These imitations are poor and worthless, and in no way resemble **Dr. Dye's Mitchella Compound,** either in composition or in results. Therefore, when ordering, see to it that you get the original **Dr. Dye's Mitchella Compound.**

If you are still in doubt as to the worth of **Dr. Dye's Mitchella Compound,** write to one or more of the women whose testimonials we publish; always enclosing a stamped and self-addressed envelope. We are always willing and anxious to allow those women who have used it to speak the plain truth as to its worth.

Price, $1.00 per package, or six for $5.00. Sent prepaid.

DR. J. H. DYE MEDICAL INSTITUTE,

P. O. Box 137. Lewis Block, Buffalo, N. Y.

Unsolicited Testimonials

Enclosed please find $5.00 for six boxes of your **Mitchella Compound Tabules.** Your **Compound** is a God-send to all expectant mothers. I took a three months' treatment before my baby girl was born. I can truly say I had no pain and she was born before my husband could go one mile and a half for my sister-in-law. She is a bright baby girl, one year, seven months old, and has never been sick an hour in her life. I always speak a good word for your **Compound** and wish all mothers knew about it. If my few lines of testimony will be of any use to you, you are welcome to publish it.

Alma Center, Wis. MRS. JAMES A. ADAMS.

Kindly send me a box of **Mitchella Compound Tabules** for the enclosed $1.00. I got three boxes two years ago and had a fine ten-pound baby girl. Never had no pain or ailments while taking the **Tabules**; could do all my own work and never felt sick. I would never be without the **Mitchella Compound Tabules** any more, for they certainly helped me along fine and I am recommending them where they are needed.

812 Willow St., Scranton, Pa. MRS. JNO. F. EGEN, JR.

BABY EVANS

I thought I would write and tell you how well I got along since I took your medicine. Just four weeks before I was confined, my four children and myself had the measles. When I took the measles, I never expected to get over them, and I baffled two good doctors how well I went through them. When confinement came, I was only in labor one hour and had only about four hard pains. The baby was a girl and weighed about seven pounds. I shall certainly always speak a good word for your medicine and tell all my lady friends that are in need of such a medicine about it. If you wish to use my name as a testimonial for it in Iowa, you are at liberty to do so.

Udell, Iowa. MRS. BLANCHE EVANS.

Please send me six boxes of **Mitchella Compound Tabules** for the $5.00 enclosed. This is not the first time I have used this great medicine. I took six boxes of the **Compound** about three years ago, with excellent results, and with very little trouble or suffering gave birth to a fine baby boy, weighing 14¼ pounds. I have highly recommended your medicine to others of my sex, and you may publish my testimonial in reference to your great medicine, **Mitchella Compound**, if you so desire, as I would not be using this remedy again if I did not know it to be good and do just as it is claimed.

Mulberry, Ark. MRS. NORA DUVALL.

I began the use of **Mitchella Compound** in July and my baby was born October 3rd, a nine pound boy, very healthy. I was in labor only a little more than an hour—my doctor and nurse both considered it a very easy confinement; recovery rapid; and I give **Mitchella Compound** and you the praise of making me a healthy woman. I suffered for nearly twenty-four hours when my first baby was born, and then I was put under the influence of chloroform and instruments resorted to. If you have no agent in this vicinity I would be glad for the chance to handle your remedies. I will answer all letters from women who wish to know more about my case.

R. No. 1, Kingsley, Mich. MRS. JULIUS MIHULKA.

BABY MORGAN

I have been using your **Tabules** for my daughter and I use them for myself, and we thank you for your medicine. It did wonderful for us. I had five children before this one and always had such a hard time. This time I used your **Tabules** and got through in less than no time. I had no doctor. My husband had to assist, and my baby is big and fat. I send you his photograph.

Pitman, Pa. MRS. CHAS. MORGAN.

I write you to let you know that I passed safely through my confinement and had a much easier time of it than I ever had before. The other time I was sick half a day and this time I was sick only half an hour and did not suffer as much as I did before. Our baby is a big, fine boy. I would like to be an agent for your fine medicine. Please send particulars.

Box 22, Pearland, Texas. MRS. I. M. ARMSTRONG.

Will you kindly inform me if you still sell the **Mitchella Compound**, also give me the price of same. Twenty-three (23) years ago I used this **Compound** which was a great help to me, and as my daughter is now a prospective mother I would like to secure the same help for her.

No. 7 So. 15th St., Colorado Springs, Col. MRS. L. C. NISBETT.

Enclosed please find money order for which send one box of **Mitchella Compound Tabules.** This is for a friend. I took your **Tabules** about two months before confinement. The baby was born before the doctor got here, after less than two hours' pain. She is a fine, healthy baby, as you can see by picture I enclose. She is now three and one half months old.

MRS. C. SORENSEN.

3441 Calumet Ave., Chicago, Ill.

BABY SORENSEN

Enclosed find **$1.00** for one box of **Mitchella Compound Tabules.** Have taken four boxes and am in perfect health. They have helped me so much.

MRS. LAURA WITHROW.

218 Wheatland Ave., Logansport, Ind.

You will find enclosed $1.00 for which send me one box of your **Mitchella Compound** in Tablet form, as I am nearly out. I used only two packages and gave birth to an eight pound girl on November 17th and was not sick but about three and a half hours. I had the easiest time I ever had. I was always sick about a day and a night before. I have been sitting up ever since baby was three days old. I cannot praise your medicine enough. I suffered with cramps and varicose veins and could hardly walk, but they have all disappeared and I feel better than I ever did before. I will praise your medicine to anyone, and have recommended it to all my friends.

R. No. 2, Nashville, N. C. MRS. J. M. TURNER.

As I promised to let you know how I came through my confinement, I thought I had better write and let you know. Our baby weighed between seven and eight pounds when born. From the time I took sick until the baby was born it was only two hours and a half. I had an easy confinement. I was really surprised, because I never thought that a confinement could be so easy. I have good faith in your **Mitchella Compound** and shall tell other women about it. I am getting along well and so is my little boy. He is a healthy baby. If I ever get pregnant again I shall use some more of **Mitchella Compound.**

Kevin, Mont. MRS. E. J. ENGLE.

Through the kindness of my sister, Mrs. James Tharp, I was induced to take your treatment, consisting of four boxes, and to express my thanks and appreciation of your medicine, I am enclosing a picture of my baby girl, Waunetta, 13½ months old the time the photo was taken. I must say she is the healthiest, smartest baby I ever saw and I give your medicine the credit. I have never been up a night with my baby and never had a doctor but once, and that was for a cold. She is one of the best babies I ever saw. There is no comparison with other babies whose mothers never used your medicine. Whenever I have a chance I will always recommend your medicine.

BABY DUNN

My sister has a little girl, four years old, who is considered a very beautiful child. She took your treatment, and my medicine was ordered through her. I also recommended your medicine to my sister-in-law, and she has a fine healthy baby. I consider your medicine a great help in childbirth.

Fulton, Mo. MRS. JNO. L. DUNN.

I used five boxes of **Tabules** and got along nicely. I think your **Mitchella Compound** is worth its weight in gold. I have a healthy baby boy. His weight is twenty-four pounds.

Cannelville, Ohio. MRS. WARREN PLETCHER.

BABY CARTER

Enclosed please find photograph of my baby. Before baby's birth I took your great remedy, **Mitchella Compound.** She is now over two years old. When she was born she weighed sixteen pounds. I am again using your **Compound** to help and aid me through my present pregnancy and coming confinement.

MRS. E. E. CARTER.

Grafton, W. Va.

I used three packages of **Mitchella Compound** and can say I was well pleased with it. I only wished I had used more. I have a baby girl, four months old, weighed eleven pounds at birth. I shall recommend your medicine to all expectant mothers, as I am sure it is good.

Oelwein, Iowa. MRS. A. D. O'NEEL.

I thought I would write and tell you how I got along when I was confined. I just used one box of your **Mitchella Compound,** and when I received it I was unable to do my housework, was weak and all run down and had morning sickness very bad. I got relief from the first two or three doses of the **Compound,** went to work and did my household duties and washing for the family up to the very last. With my twins I was in labor about 48 hours, but with the last child I was in labor about 25 minutes and gave birth to a nine-pound girl. I had five labor pains. The baby is very healthy. Has had only one spell of sickness which was hives. She will soon be three months old. Your medicine is worth its weight in gold, and if ever I am in need of it again, you will receive my order. You may use my testimonial if you wish.

R. No. 1, Box 148, Earleyville, Tenn. MRS. DELIA FOSTER.

I suffered three days before the birth of my first baby. I had not then heard of your wonderful medicine, but before the birth of my second baby I took three packages of **Mitchella Compound** and was only sick a very short time. Baby is now two months old and very fat and healthy. I will always speak a good word for your wonderful medicine, as I know it saved me lots of suffering. You may print this if you wish and I will answer any letter of inquiry, enclosing a stamped envelope for the reply.

Hawkeye, Mo. MRS. ZYLPHA STRUTTON.

BABY HEAGY

Inclosed you will find a picture of my baby. She was eight months old when it was taken. I took two boxes of Dr. Dye's **Mitchella Compound Tabules** and same helped me greatly. You may publish this picture if you wish. My baby is well and hardy.

MRS. ALLEN HEAGY.

Mount Joy, Penna.

Your **Mitchella Compound** is certainly a wonderful medicine. With my last baby I was only sick three hours, and not so sick as with my two first children. The baby was a boy and he weighed seven pounds at birth, ten pounds at one month, sixteen pounds at three months. He will soon be four months old, and so far I have not lost one hour of rest. He is a dandy. Success to you.

Box "B," Robinson, Utah. MRS. LEONARD W. PECK.

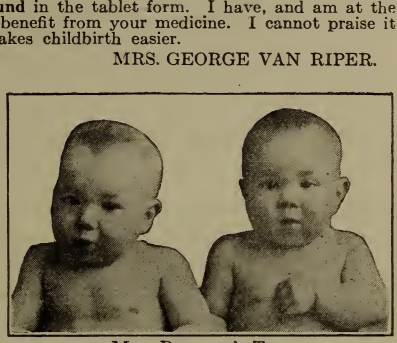
Enclosed you will find money order for $1.00 for which please send me one package of **Mitchella Compound** in the tablet form. I have, and am at the present time, deriving much benefit from your medicine. I cannot praise it too much, as it certainly makes childbirth easier.

239 11th St., Renova, Pa. MRS. GEORGE VAN RIPER.

We have two little twin girls, six months old, and weighing twenty pounds each. I only took two boxes of your **Mitchella Compound** and did not have one pain. I thank you again for your great help. I send herewith the picture of my twin babies.

MRS. MATILDA BELLOCK.

Vilas, S. D.



MRS. BELLOCK'S TWINS

I will write you a few words in praise of your **Mitchella Compound**. I have used it twice and cannot praise it high enough. Each time I was only sick for a few hours and suffered very little, and at other times I almost suffered death for two or three days and nights. I think your medicine makes healthy babies. I have a fine baby boy, five months old, weighs eighteen pounds. I never had a doctor either time and got along so fine. Never had any trouble. I know God will bless you for the help you have been to women. I have advised all pregnant women of this community to use your medicine, and several have tried it and it has proved all you claim for it. I shall always praise **Mitchella Compound.**

Pine Level, Fla. MRS. SARAH FORD.

I will drop you a few lines to let you know how nicely I got through my dreaded confinement, and was up and around on the tenth day and felt real strong. I gave birth to a nice baby boy which weighed ten pounds. My attending doctor was so surprised to think that I would get along so nicely on account of my age. I shall be pleased to recommend your **Mitchella Compound** and thank you for such a God-send to women in my case.

Bonner Springs, Kan. MRS. J. C. VAN ZANT.

I took your **Mitchella Compound** before my baby was born and got along very well. My baby weighed fifty-seven (57) pounds at eighteen (18) months old. Everybody says she is the finest baby they ever saw. A great many people come to town to see my baby. She is a show for everybody and the joy of our home, as you will readily see by the photograph I enclose of her. If you wish to use this letter, you are at liberty to do so. I am now on the road to motherhood again and, as I derived so much benefit from your **Compound** before, I wish to use it again.

MRS. MAGGIE BAKER.

Greenville, N. C.

BABY BAKER

I will enclose $3.00 for which send me three boxes of **Mitchella Compound Tabules**, for I cannot recommend them high enough for the good they have done for me.

Cyclone, W. Va. MOLLIE BAILEY

I will write to thank you for the good your **Mitchella Compound** did me. My baby was born March 18th, and everyone said I certainly had a fine time. Was only in pain two hours, and everyone predicted a hard time, and one good thing—I never suffered with anything before—not even morning sickness. I certainly have a fine baby boy—one who has never been sick a day. I am very glad I took the **Compound.** I am ordering one box now for a friend, which I hope you will send at once.

424 Main St., Camden, N. J. MRS. J. C. SCHWENKER.

I have used your **Mitchella Compound** and I think it has no equal for what it is recommended.

Gorman, Tex. MATTIE B. SELLERS.

Enclosed please find $2.00 for which send me two packages of your **Mitchella Compound.**

Have used your medicine and think it is worth its weight in gold.

Seneca Falls, N. Y. MRS. H. B. EDKIN.

After so long a delay I will write and let you know how your medicine has benefited me. It did me, I must say, a world of good. Baby weighed 10½ pounds and the brightest babe we ever had. I had an easy and short labor—was only sick 2½ hours, when I was always before from six to nine hours. My baby weighed 19½ pounds at 6½ months old. I have recommended the **Compound** to several women who are now taking it. I feel very grateful for what your medicine has done for me.

Box 136, Cameron, W. Va. MRS. BERTHA HIBBS.

I will try and write you this evening and tell you what your wonderful medicine did for me. I took three boxes of your **Mitchella Compound** and had an easy time at confinement. I was not sick but four hours and I was not in labor fifty minutes. My baby is a fine healthy girl. I can gladly recommend your medicine to all suffering women. I had a box of the **Tabules** to take after the baby was born, but I feel so well I do not think I need the medicine. I had no faith in your medicine when I saw your advertisement in the paper, but it is just what you claim it to be. I was always sick and feeling bad through pregnancy until this time—I felt fine. I can never praise your medicine enough.

Tokio, Ark. MRS. ZADIE ASKEW.

Too much cannot be said in favor of **Mitchella Compound.** It will do all it is claimed for. I took five packages before confinement and one after. I did not suffer any to speak of—I was on my feet until the last minute. I rushed them to fix my bed, laid down, had three pains and I gave birth to an eight-pound boy. I surprised them all. This is my fourth baby and I always suffered before. I got up the seventh day feeling strong. I never got up before before the eleventh day, then had to be held so I wouldn't faint. I am stronger than ever before, doing all my own work since baby is fourteen days old. You can print this and, if anyone doubts it, they can just write me, enclosing postage, and I will answer all inquiries.

I also have a copy of your book **Painless Childbirth** and think it grand. I left two others read it and they say the same.

R. No. 1, Knierin, Iowa. MRS. GEO. I. WILHELMS.

I want to tell you what a great help your **Tabules** have been to me. I only used one and one half boxes and gave birth to twin babies, a boy and a girl. The boy weighed ten pounds and the girl eight pounds. They have never been sick a day. I did not have a half hour's pain and did not have a doctor. Everything was over with so quick. I would have been all alone but for the aid of the telephone and automobile, and every time before I was so slow and helpless that the neighbors were afraid to be near me, and even then I would have a doctor, and after all my sufferings at confinement, and months of suffering before, I would lose my babies. I wish every suffering sister could only have seen what a miracle your **Tabules** worked for me. It is the wonder of everyone who hears about it. I was able to do all my work and was just fine after my babies were born. I could have gotten up and took care of them so far as

strength was concerned. I am trying to get more suffering sisters to try your **Tabules**. Oh, how welcome the word "confinement" would sound to all sisters' ears if they would try your miracle-working medicine. They will have to try it to find out how good it is, as its goodness cannot be spoken in words good enough. If you wish to use my name in regard to the benefit your medicine does, you are welcome to do so.

R. No. 1, Oak Hill, Kans. MRS. CHRISTINA A. NOLAND.

Enclosed find $1.00 for which please send me one box of your **Mitchella Compound Tabules.** I have taken four boxes of your **Mitchella Compound** and find it a great benefit. I have a fine boy five days old. I only remained in bed two days, and when baby was born I only had two pains worth speaking of. He is the largest and healthiest one out of my four, and has been no trouble so far. I am feeling fine. Many thanks to you.

R. No. 5, Marshall, N. C. MRS. SARAH FRISBEE.

Enclosed find money order for $1.00, for which please send me one package of **Mitchella Compound**. I took the last of the **Compound** one month ago and cannot do without it. I have a fine boy two months old—he weighed nine pounds at birth. I think your **Compound** a wonderful medicine.

R. No. 8, Box 7, Columbia, Tenn. MRS. FRANK HAMMON.

Although my baby is seven months old I feel that I ought to write you what **Mitchella Compound** has done for me. After undergoing terrible suffering at two previous confinements where instruments were used, losing both babies, at this birth I was sick just one hour and twenty-five minutes and gave birth to a five-pound baby girl. I was up on the sixth day and felt fine. My baby is well and strong, weighing sixteen pounds now. I have persuaded several to use your medicine, with good results, and am now sending for three one dollar boxes of the **Mitchella Compound Tabules** for a sister of mine.

You are at liberty to use my letter if you wish.

Blencoe, Iowa. MRS. W. C. ISOM.

I have used your **Mitchella Compound** before the birth of each of my three children and have been able to work and do everything just the same as usual. Never have any kind of sickness and scarcely any pain at confinement. Children are fat and healthy.

Shellsburg, Iowa. MRS. ANNA KING.

I feel it my duty to give you my testimonial. You may publish it if you wish. In April, 1903, I became pregnant and my condition was such that I had to take to my bed. After three months of severe suffering and after all other medicines had failed, **Mitchella Compound** almost raised me from the dead. I would not be without it at that time for five times its cost.

R. No. 2, Fyffe, Ala. MRS. CORA GRAVES.

Are You Afflicted with Any Kind of Chronic Disease?

For nearly a quarter of a century I have been investigating and treating all forms of obscure, delicate, chronic diseases. During this time I have developed a system of treatment and discovered remedies with which I am able to cure, even after other remedies have been used in vain, all such obstinate, lingering maladies of both sexes as kidney and bladder diseases, chronic nasal catarrh, asthma, bronchitis and incipient consumption, diseases of the heart, liver and nervous system. All blood poisons, rheumatism, gout, neuralgia, epilepsy, Saint Vitus' dance, spinal irritation, paralysis, all forms of diseases peculiar to women, as well as the ailments incident to men—spermatorrhœa, impotency, strictures, etc., etc., etc.

By the method now pursued by me, all cases not requiring surgical treatment can be cured at their own homes with small expense.

I cordially invite all afflicted persons, no matter what the nature of their ailments may be or of how long standing or what treatment they may have tried in vain, to write me. I make no charge for such consultation and they may write me fully and freely in perfect confidence. No one sees their letters but myself, consequently any secret they confide in me will be perfectly safe.

The first step towards a cure is a correct diagnosis; this I can make without difficulty if the patient will answer my questions carefully. To enable them to do this I will send examination blanks to those desiring them. If on their return I find additional questions necessary, I will ask them, until I obtain the necessary information. Analysis of the urine will be made whenever it can be of advantage or benefit to the patient or necessary to complete my diagnosis.

Diagnosis is both a science and an art—qualifications all do not possess, by any means, or there would be fewer mistakes and more cures. My methods are based upon scientific principles and are successful. I begin right, and then spare no pains for my patrons' benefit.

Occasionally there is a physician who will advise patients against being treated at a distance, but it is either because they are ignorant of the method pursued, bigoted or jealous. Sometimes they will appeal to the patients' incredulity, but there is usually a selfish motive in it, which a few have even carried so far as to prefer their patients should never get well than that somebody else should cure them. My experience extends over many thousands of cases in which every conceivable manner of complications existed. My opportunities have been practically unlimited and certainly far better than one whose practice has been confined to a certain locality, and in this regard the aphorism that "practice makes perfect" is true if it ever is.

I can furnish the very best kind of references as to my qualifications and integrity, but I want all to investigate for themselves. If, on investigating any

case submitted to me, I find it incurable, I will tell the patient candidly his or her condition.

Afflicted Reader, I offer you health. I can cure you if it is in the range of human possibility; but, remember, chronic diseases are progressive, they thrive by neglect; therefore, do not procrastinate. Write me freely; it will not cost you anything and may save your life. If the experience of a quarter of a century counts for anything it is in your favor.

In writing me be explicit. Describe all the symptoms you experience. It is my province to unravel the tangled skein of pathological derangement. Describe your ailments in your own language and I will understand it and use it to your benefit

Address all communications plainly and they will receive prompt attention.

Respectfully and sincerely yours,

JOHN H. DYE, M. D.,
Buffalo, N. Y.

A Few Testimonials From Grateful Patients

Sterility.

I want to let you know what your special treatment did for me. You can use this for a testimonial if you so desire. I am now pregnant just sixteen weeks. I have no more indigestion or pain and am gaining in flesh. I have told several of my friends and they can hardly believe it, as I have been married seven years this January and never had a child. I am glad, however, to say that I am now on the road to motherhood.

Box 102, Hewlett, N. Y. MRS. L. GANGLOFF.

I have taken your medicine about nineteen (19) years ago in the Change of Life. I am now fifty-six (56) years old and never see a sick day and never have an ache or pain. Before I took your treatment I was never well and was always troubled with constipation, and since I have taken your treatment I have never been troubled with this ailment. Would advise both young and old to try **Dr. J. H. Dye's** cures for all ailments of the body.

Chester, W. Va. MRS. M. E. RUSSELL.

Sterility.

After taking your special treatment I find that I am now about five months along on the road to motherhood. I have not had one sick morning.
Milford, Cal. MRS. G. R. WALES.

Rheumatism, Constipation, Catarrhal Congestion of the Stomach.

I enclose money for another month's special treatment, the same as you last sent me. I am very much improved and have not been as well in twenty years as I am now.
R. No. 5, Dover, Del. MRS. MARY M. FAULKNER.

Weak Nerves, Leucorrhœa, Backache, Displacement of the Womb.

I was very glad to hear from you and still gladder to get the treatment. Doctor, I am still improving in every way and I am so thankful to you and to your fine treatment. All praises to you and I praise you from the depths of my heart. I have told all of my friends who are suffering from womanly ailments what you have done for me, and I will do my best to get them to try your treatment.
Box 127, Dardanelle, Ark. MRS. WM. HELM.

Painful Periods, Leucorrhœa, Headache, Female Weakness.

I will write you to let you know how I am getting along. I just feel fine. I feel like a new person altogether. Before taking your medicine I suffered terribly at the time of my monthlies, but this time I hardly knew I was that way. I am able to do my own work without feeling a bit tired, while before I could hardly sweep the floor. You are at liberty to use my testimonial if you like.
R. No. 2, North Liberty, Ind. MRS. NANCY BARTON.

Rheumatism, Congestion of the Kidneys.

I had rheumatism in the ankles so bad that I could not sleep at night because I was in so much pain. I used your special remedies for one month and they helped me wonderfully. My ankles are not nearly so painful now. Many thanks for your medicines. I will recommend your medicines to all.
Box 14, Riverton, N. H. MRS. JNO. E. DEERING.

This is to certify that one year ago I was suffering untold misery and had been for seven months. I had rheumatism, nervous neuralgia and sudden cold. They had three different doctors with me, but they and all other medicines failed to do me any good until your agent, Mrs. Maggie Gary, came along with your medicine, which began to help me at once. Gentlemen, I cannot describe how I suffered those terrible months. I had given up all hope, my people and friends also had lost all hope. When I began using your medicine I was so near gone it did not look as if I could live from one minute until the next. I was so nervous I could not hold still on the bed. I thank you a thousand times for the wonderful good your medicine did me. I cannot praise it as much as I want to, for I believe if it had not been for your medicine I would have been in my grave. May God bless you and may you succeed in the good work you are in is my earnest prayer. If you like, you may print this, as I would like every suffering girl and woman in the country to know how I have suffered and how I was benefited by your medicine.
Smith, W. Va. MISS SARAH F. ALBRIGHT.

I am only glad, too glad, to write a testimonial and let others know my case. I owe my health and happiness to **Dr. Dye's Mitchella Compound** and **Female Cones.** I have been married going on seven years, and by using his two medicines and following his advice I soon began to feel better and found myself pregnant, and words cannot express the happiness I felt. I am sorry, however, to say that I quit using them for a while and then by moving upstairs in a brick house, I had steps to climb, and greatly to my sorrow, had a miscarriage. I, however, again began taking **Mitchella Compound** and I am now delighted to say I am going on three months pregnant. I am enjoying the best of health and have all hopes of carrying this baby the full nine months. I bless the day I started to take **Dr. Dye's** remedies and strongly advise all women to give **Mitchella Compound** and **Female Cones** a fair trial. I recommend **Dr. Dye's** medicines to young and old—they save doctor's bills and are a help and saving to all. I cannot fully express my appreciation to Dr. Dye. My sincere wish is that he may live long to help suffering women. I write this hoping it may be published.
Box 282, Enid, Okla. MRS. GRACE WEISSINGER.

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